

**Teachers' implementation of translanguaging in EFL classrooms:  
a systematic review**

Xuechun Huang

Department of Education, University of Oxford

Kellogg College

Supervisor: Dr. Hamish Chalmers

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## **Plain Language Summary**

### **Background**

Translanguaging means the discursive practices of bilingual speakers to select linguistic features from a single linguistic repertoire for communication without careful adherence to the boundaries of externally and socially constructed named languages. When used as a pedagogy, translanguaging advocates the use of learners' mother tongue as a resource for teaching and learning. This pedagogy, also referred to as pedagogical translanguaging, has been used in English language teaching (ELT) classrooms across the world. It has been compared to the monolingual approach, which only allows the use of the target language, English, in the classroom. However, little is known about the effects of pedagogical translanguaging on English language proficiency in EFL contexts.

### **Objectives**

This systematic review aimed to provide a synthesis of the effects of pedagogical translanguaging in ELT classrooms on English language proficiency among learners who learn English as a foreign language (EFL).

### **Methods**

This study used the method of a systematic review following the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guideline to search literature between 2009 and 2021 (inclusive) in 10 databases covering education, linguistics, and psychology. A list of inclusion and exclusion criteria was developed to determine the eligibility of the studies for inclusion in this systematic review. The two-stage selection process included screening titles and abstracts and screening the full texts. A second reviewer screened samples of titles and abstracts and full texts to reduce the chances that eligible studies were mistakenly excluded. Data were extracted and the quality of each included study was assessed. A narrative synthesis was used.

## **Results**

After duplication, 4,479 records were screened in the title and abstract screening, among which 29 papers were screened in full-text screening. In the end, 10 studies were included for synthesis. Most of the included studies assessed the effects of pedagogical translanguaging on EFL reading and writing, while vocabulary, grammar, listening, and speaking received much less attention. In terms of learning outcomes, half of the studies favoured the translanguaging group; however, four of these studies were rated as low-quality. Another half of the studies, which involved two high-quality studies, either favoured the translanguaging group only in a few measures or found no significant difference between the translanguaging group and the English-only group. The current evidence can only show possible short-term benefits of pedagogical translanguaging in teaching some English grammatical features and some aspects of English writing. As the majority of the included studies have methodological flaws, the existing evidence is not robust enough to be conclusive.

## **Implications**

Pedagogical translanguaging can be used for various EFL teaching and learning purposes; however, teachers are advised not to overestimate its effects on English language proficiency. More relevant research that assesses the effects of pedagogical translanguaging in both the short and long term should be done. Researchers and teacher educators should help EFL teachers interpret the current studies on pedagogical translanguaging and provide professional support if teachers have doubts and confusion about adapting new teaching approaches.

## **Abstract**

The theory of translanguaging has been widely discussed in the field of applied linguistics both as a model to describe bilingualism and as a pedagogy. It seems promising to implement pedagogical translanguaging in various types of lessons and contexts, but little is known about the impact of pedagogical translanguaging in English language teaching (ELT) classrooms on English language proficiency among learners who learn English as a foreign language (EFL).

This systematic review aimed to provide a synthesis of the approaches that have been assessed for effectiveness in EFL classrooms and the effects of these approaches on substantive outcomes. A systematic process of searching and selecting the literature found 10 empirical studies eligible for synthesis. Data were extracted and the risk of bias of the included studies was assessed. Data were synthesised using narrative synthesis.

Results showed that pedagogical translanguaging was more frequently used to teach EFL reading and writing than vocabulary, grammar, speaking and listening. Five studies favoured the translanguaging group but four of them were rated as having high risk of bias. The rest of the studies, which involved two high-quality studies, either found no statistically significant difference between translanguaging and English-only groups or favoured the translanguaging group in only a small number of measures. The included studies showed that pedagogical translanguaging was potentially helpful in teaching some features of English grammar and writing, but the persistence of these effects was largely unexplored. Altogether, there were insufficient well-designed and well-conducted studies in EFL contexts to support the claim that pedagogical translanguaging is beneficial.

Teachers are advised to reflect on their current ELT pedagogies and are encouraged to

try new approaches, including pedagogical translanguaging. However, teachers should be aware that the effects of pedagogical translanguaging on English language proficiency have been inconclusive. Researchers and teacher educators need to help teachers understand the theory of pedagogical translanguaging and interpret the findings of empirical studies.

**Keywords:** translanguaging, English as a foreign language, English language teaching, systematic review

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## **List of Abbreviations**

CLIL: content and language integrated learning

EAL: English as an additional language

EAP: English for academic purposes

EFL: English as a foreign language

ELT: English language teaching

EMI: English medium instruction

ENL: English as a new language

ESL: English as a second language

ESP: English for specific purposes

GRADE: Grading of Recommendations Assessment, Development, and Evaluation

IDESR: International Database of Education Systematic Reviews

IELTS: International English Language Testing System

L1: first language

L2: second language

PRISMA: Preferred Reporting Items for Systematic Review and Meta-Analysis

PRISMA-P: Preferred Reporting Items for Systematic Review and Meta-Analysis

Protocols

RCT: randomised controlled trial

SLA: second language acquisition

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# Chapter One Introduction

## 1.1 Translanguaging as a research trend

Translanguaging has been proposed as a practical theory of language in applied linguistics (Li, 2018). The term translanguaging in English was a direct translation from a Welsh word used to describe real classroom practice in the 1990s and later developed as a theory to describe bilingualism and a way of pedagogy (Conteh, 2018). When it is used as a pedagogy, it can also be called pedagogical translanguaging. Pedagogical translanguaging refers to the integration of two or more languages in instructional strategies (Cenoz & Gorter, 2021). This dissertation uses translanguaging to refer to the theory generally, while uses pedagogical translanguaging to refer to the use of the whole language repertoire for educational purposes.

The notion of translanguaging has been developed against the backdrop of a paradigm shift that rejects monolingual standards in the understanding of language learning and use (Anderson, 2022). Xin et al.'s (2021) bibliometric analysis found that the development of translanguaging has shown a rapid and upward trend from 2000 to January 2022 with an overall annual growth rate of 15.76% in the number of publications worldwide. This bibliometric analysis also showed that before 2019, the research themes were emergent bilinguals, bilingual education, plurilingualism, and identity, while since 2019, translanguaging pedagogy has become a basic theme. Therefore, a systematic review of pedagogical translanguaging echoes recent research interests in the field.

The difference between translanguaging and other terms is demonstrated by its “trans” prefix and “ing” suffix. The “trans” prefix carries the meaning of “transcend”, “transform”, and “transdisciplinary” (see section 2.2.1), while the “ing” suffix means the action is ongoing (Li & Lin, 2019). Research into translanguaging can not only add to the understanding of translanguaging as a theory and practice but is also relevant to the field of applied linguistics and second language acquisition (SLA) more broadly.

This is because translanguaging is related to at least two classic questions in this field. First, how to understand the linguistic system of bilinguals and multilinguals (MacSwan, 2017; Otheguy et al., 2015). Second, whether the first language (L1) is beneficial to second language (L2) teaching and learning (Macaro, 2022). The answer, from the perspective of translanguaging theory, to the first question would be translanguaging holds the view that bilinguals have a unitary linguistic system, despite the existence and importance of external socio-cultural boundaries of languages (Otheguy et al., 2018). The answer to the second question, from a translanguaging point of view, is that it is beneficial as it helps encourage the creativity and criticality of multilingual learners and maximise their potential (Li, 2022). However, it is still unknown whether it is beneficial in the sense that it helps improve language proficiency. This systematic review aims to contribute to the discussion of the pedagogical values of translanguaging by synthesising research evidence of the effectiveness of pedagogical translanguaging when it is used in English language teaching (ELT) in English as foreign language (EFL) contexts.

## **1.2 Scope of this systematic review**

To establish the nature and extent of our collective knowledge about the substantive educational effects of pedagogical translanguaging a systematic review is necessary. A systematic review uses methods that are explicit and replicable to search, critically appraise, and systematically synthesise literature on a specific issue (Gopalakrishnan & Ganeshkumar, 2013). This systematic review focuses its scope in terms of three aspects.

First, although many interventions involve the use of L1, this systematic review focuses only on the studies that describe the intervention as translanguaging (and in particular, pedagogical translanguaging). This is to ensure that the included studies share this same assumption when interpreting the intervention and participants' practices. Translanguaging implies the underlying theoretical principle that the students, although learning a specific L2, have a unitary linguistic system as bilinguals. However, other terms that also involve the use of L1 may not hold the same theoretical position

as translanguaging in this regard.

Second, this systematic review limits the context at the macro-level by specifying the status of English in the research contexts. It only includes studies conducted in contexts where English is taught and learned as a foreign language.

Third, this systematic review also specifies the context at the micro-level. It only includes studies where the subject of teaching and learning is the English language.

### **1.3 Dissertation outline**

Chapter One has introduced translanguaging as a research trend and the scope of this systematic review. Chapter Two discusses the background and rationale of this systematic review with relevant literature on translanguaging. Chapter Three introduces each step of conducting this systematic review. Chapter Four presents the results of the study selection and synthesis of the findings from the included studies. Chapter Five discusses the findings and gives the interpretation of the findings. Chapter Six concludes the current study and presents implications, limitations, and suggestions for future research. The dissertation is structured around the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) reporting guidelines (Page et al., 2021).

## **Chapter Two Background and Rationale**

### **2.1 Introduction**

This chapter begins with the theoretical foundations of translanguaging and the similarities and differences between translanguaging and its related terms. It then discusses how translanguaging is related to the sociocultural and multilingual turns in SLA, followed by an overview of translanguaging in EFL contexts. This chapter concludes by identifying gaps in the literature and, consequently, the rationale for conducting this systematic review.

### **2.2 The translanguaging theory**

#### **2.2.1 The conceptualisation of language, languaging, and bilingualism**

The notion of translanguaging aims to provide a new perspective from which to interpret language and bilingualism. Proponents of translanguaging make the distinction between speaking a language and performing the act of languaging. Becker (1991) proposed that languaging is not the same as language in that languaging is an activity of human beings. Similarly, Swain (2006) referred to languaging as the meaning-making dynamic action of using language, which mediates L2 learning. That is, to view languaging as a practice that happens along with L2 learning. Thibault (2011) also argued that languaging is the first-order activity, while languages are positioned in the second order, which are constructs developed by certain populations. The view that languages are codes specifies linguistic patterns, such as abstract verbal patterns, morphosyntax, lexicogrammar (Li, 2018).

In the context of bilingual education, the term “translanguaging” was first used in its Welsh form “Trawsieithu” coined by Williams (1994) to describe the classroom practice of using English and Welsh in turn to complete one overall task during the time of Welsh language revitalisation in the late 20<sup>th</sup> century (Conteh, 2018; García, 2009; Lewis et al., 2012). Baker (2001) translated the word to English and introduced the

practice of translanguaging as a useful way to develop learners' skills in two languages. Later, García (2009) extended the idea of translanguaging beyond the alternation of languages in the classrooms and defined it as “the multiple discursive practices in which bilinguals engage in order to make sense of their bilingual worlds” (p. 42). García and Lin (2017) have also differentiated the strong and weak versions of translanguaging. The strong version of translanguaging posits that bilinguals have a single linguistic repertoire, while the weak version of translanguaging acknowledges the boundaries between national and state languages but calls for softening the boundaries in education. Drawing on examples in multilingual societies and previous theories of languaging, Li (2018) argued that translanguaging captures the fluid and dynamic practices of bilingual speakers such as creating words that follow the grammatical structure of one language but correspond to meanings in another language. Li (2018) suggested that by adding the “trans” prefix “languaging”, translanguaging refers to practices that *transcend* different socially defined language systems and structures, change the cognitive and social abilities of bilinguals in a *transformative* way, and offer *transdisciplinary* perspectives for the re-conceptualisation of language, language learning, and language using.

Vogel and García (2017) have highlighted three core theoretical foundations of translanguaging. First, translanguaging posits that individuals have only one unitary linguistic repertoire, from which they select and use features for communication. This has made translanguaging different from codeswitching, which posits that there are different codes (languages) to switch between. Second, translanguaging prioritises the dynamic linguistic and semiotic practices above the named languages in the understanding of bilingualism and multilingualism. Third, translanguaging still acknowledges that named language categories and structuralist language ideologies have material effects such as the idea of language purity and verbal hygiene. Translanguaging does not reject that there are different named languages (e.g. Arabic, Chinese, German, etc.) defined by nations and states; however, translanguaging suggests that bilingual individuals are not necessarily careful with these boundaries in

daily use.

More recently, Cenoz and Gorter (2021) have distinguished between spontaneous translanguaging and pedagogical translanguaging. The former refers to “the reality of bilingual usage in naturally occurring contexts where boundaries between languages are fluid and constantly shifting” (p. 18), while the latter is “a pedagogic theory and practice that refers to instructional strategies which integrate two or more languages” (p. 18).

### **2.2.2 Translanguaging and its related terms**

Translanguaging is one of the terms that attempt to offer a model to capture the language use of bilingual or multilingual speakers. Other different models of bilingualism include a traditional model of bilingualism, Cummins’s model of interdependence, and code-switching.

As shown in Figure 2.1, the traditional model of bilingualism conceptualises bilinguals as having two rigidly separate linguistic systems. Other terms have been used to describe such a model of bilingualism, such as separation approach (Swain, 1986), parallel monolingualism (Heller, 1999), and separate bilingualism (Creese & Blackledge, 2010). The idea that the two languages should be kept rigidly separate in language learning instruction was termed the “two solitudes” assumption by Cummins (2007). It was reflected in two-way bilingual immersion programmes in the United States and Canada, where bilinguals were taught by monolingual teachers in separate monolingual classes (see Lambert, 1990). In these programmes, only the target language would be used in class.

Cummins’s interdependence hypothesis proposes a different model, suggesting that on the surfaces, the different languages of bilinguals are separate but there is a Common Underlying Proficiency that enables the linguistic skills developed in one language to be transferred into another language (Cummins, 2007). Based on such an assumption, teachers can use students’ L1 in L2 learning lessons to draw learners’ attention to the

similarities and differences across languages.

Codeswitching means switching between two or more languages (Macaro, 2005). The model of codeswitching is also based on the assumption that bilinguals have separate linguistic systems but can alternate between these languages all the time. It still builds on “the notion of named national languages (the external view) rather than on the ways in which bilingual speakers deploy their own linguistic resources (the internal view)” (García & Kleyn, 2016, p. 14).

Translanguaging is different from these models in that it supports the unitary view of the bilingual mind (Otheguy et al., 2018). This unitary view holds that bilinguals select features from only one linguistic repertoire for effective communication (García, 2009). In this only linguistic repertoire, there are a number of different linguistic features (F) rather than separate socially named languages (L). When bilinguals or multilinguals think and speak, they do not pay attention to the boundaries between the socially constructed named languages (Otheguy et al., 2015). In addition, they will use various cognitive, semiotic, and modal resources to express their ideas (Li, 2018).

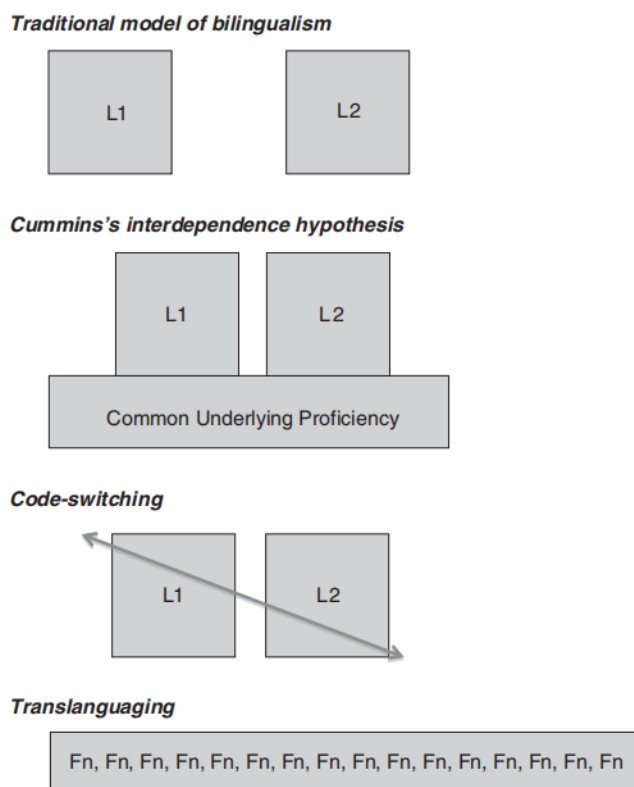


Figure 2.1 Different models of bilingualism (García & Kleyn, 2016, p. 13)

Other terms that are relevant to translanguaging include codemeshing (Canagarajah, 2011), polylingualism (Jørgensen, 2008), and metrolingualism (Otsuji & Pennycook, 2010). Codemeshing is a “communicative device used for specific rhetorical and ideological purposes in which a multilingual speaker intentionally integrates local and academic discourse as a form of resistance, reappropriation and/or transformation of the academic discourse” (Michael-Luna & Canagarajah, 2007, p. 56). Like translanguaging, codemeshing regards bilinguals as having only one integrated system (Canagarajah, 2011). However, they are different in that “whereas codemeshing is seen as a form of resistance, translanguaging is positioned as the discursive norm that names a reality other than a monolingual one” (García & Li, 2014, p. 40).

Polylingualism or the behaviour of polylingual languaging is to use combinations of different features rather than different languages (Jørgensen, 2008). Metrolingualism is the practice of borderless language crossing (Otsuji & Pennycook, 2010). Translanguaging shares similarities with polylingualism and metrolingualism as they both highlight creative and fluid languaging where speakers draw on a wide range of linguistic features to communicate (Alimi & Matiki, 2017). However, translanguaging has extended the focus of polylingual languaging and metrolingualism in urban societies to all contexts and all bilinguals and multilinguals (García & Li, 2014).

## **2.3 Translanguaging and changes in the field of SLA**

### **2.3.1 Translanguaging and the sociocultural turn in SLA**

Growing from the cognitive revolution during the 1970s, the field of SLA was once dominated by the ideas of cognitivism that attribute language acquisition to cognitive ability (Atkinson, 2011). That is, the success of first or second language learning can be best explained by a human’s internal mechanism. However, the later sociocultural turn in SLA has shifted researchers’ attention to the social and cultural environment in which a language is learned and how learners can be best supported (e.g. Vygotsky,

1978). Drawing on sociocultural theories, Swain and Watanabe (2013) have highlighted the benefits of collaborative dialogue (a type of languaging in which speakers build knowledge together) for L2 learning when students share and modify their understandings of L2 grammar and vocabulary through peer interaction.

Translanguaging has been established as a sociolinguistic and psycholinguistic theory (Vogel & García, 2017). Informed by the idea of languaging as a social practice, translanguaging is also closely related to the sociocultural theory that views language as a cognitive tool to mediate and scaffold learning (Swanwick, 2017). Increasingly, educators seek to explore the pedagogical values of the Translanguaging Space, a social space generated for and through translanguaging that allows translanguaging users with different identities to co-exist and create new identities (Li, 2011, 2018). When teachers and students use translanguaging to ask for information, make a claim, inform others, and build rapport, they are experiencing the co-construction of knowledge and co-learning of language (Duarte, 2019; Lin, 2019; Martin-Beltrán, 2014; Rajendram, 2021). By enabling two-way meaningful interaction, translanguaging can alleviate stress and anxiety in L2 classrooms and keep students motivated (Wang, 2020).

Although translanguaging scholars argue for a cognitively unitary linguistic system, they still acknowledge that bilinguals have more than one identity socially and culturally (Otheguy et al., 2018). A translanguaging approach welcomes teachers and students to bring cultures and knowledge of their everyday life into the classroom (Tai & Li, 2020). It goes beyond the scaffold for learning but also helps the co-learning of cultural values and the co-construction of identities as immigrants and multilingual speakers (Li, 2013).

### **2.3.2 Translanguaging and the multilingual turn in SLA**

There has been a popular view that only the target language should be used in language teaching classrooms (Cook, 2019). Lin (2015) has suggested that this belief became prevailing because of a number of reasons. First, many people believe that

multilingualism should be achieved through parallel monolingualism (see section 2.2.2) of different languages. Second, people associate the use of L1 with the traditional grammar-translation method that uses L1 extensively to teach L2. However, many pedagogies that discourage the use of L1 have been developed to overcome the perceived weakness of the grammar-translation method, such as the direct approach and communicative approach. These pedagogies that focus on communication skills have become popular in the United States and the United Kingdom, where ELT teachers usually speak English as their L1. Such methods do not teach teachers how to use students' L1 for L2 learning. Third, Krashen's (1982) maximum input hypothesis that encourages maximising the input of L2 for L2 learners has been over-adapted so that the role of L1 in making the input comprehensible is always neglected. Lastly, the preference for the L2-only approach has been influenced by the reported advantages of language separation in bilingual education in some early studies conducted in the United States.

However, the target-language-only view is being challenged with the ongoing multilingual turn in SLA that recognises multilingualism rather than monolingualism as the norm in society (Conteh & Meier, 2014; May, 2014; Sembiante, 2016). This turn means a shift away from the monolingual ideologies that focus on the monolingual standard (Cenoz & Gorter, 2020). From a monolingual perspective, the L2 learners are compared to monolingual speakers and are expected to follow the norm of a native speaker; however, a bilingual perspective views L2 learners as speakers with "the overall system of a mind or a community that uses more than one language" (Cook, 2016, p. 2), termed as multicompetence. As Grosjean (2010) put it, bilinguals should be not defined by whether they achieve perfect and equal fluency in each of their languages; bilinguals are described in terms of both language use (from "never use" to "daily use") and language fluency (from low to high) and the emphasis should be put on language use.

The proposal of using translanguaging as a pedagogy has emerged from the wide discussion on involving students' home language in the classroom over the past 20 years

(Leung & Valdés, 2019). Translanguaging is not only used to describe the nature of multilingual minds but also refers to one of the strategies that use multilingualism for teaching purposes. As multilingualism has always been a common phenomenon, linguistic diversity among teachers and students should be seen as a resource instead of a problem in multilingual classrooms (Chalmers & Murphy, 2022). Sometimes teachers do not necessarily need to know the minority languages of the students to incorporate translanguaging into their teaching. For example, in Duarte's (2020) study, the teachers, who could not understand the students' mother tongue, invited the learners to say the target words in their L1s. Such an approach is an attempt to acknowledge migrant language and shows an appreciation of all languages in the multilingual classroom. It should be noted that translanguaging is not about how many languages the teachers know, but it is about valuing different linguistic resources for knowledge building (Li, 2022).

## **2.4 Translanguaging in EFL contexts**

### **2.4.1 The use of L1 in EFL classrooms**

The difference between ESL (English as a second language) and EFL is related to Kachru's (1985) three-circle models of where and how English is used. ESL refers to the contexts in the Outer Circle where English is usually the official language in post-colonial settings, while EFL refers to contexts in the Expanding Circle where English is not an official but an international language (Biewer, 2011; Galloway & Rose, 2015). English has gained its importance in EFL settings as a result of various reasons, including the need of many countries to promote international communication and intellectual exchange (Bolton & Graddol, 2012). At the same time, English language learners are usually also multilingual speakers who use English as a lingua franca to communicate with each other when their only common language is English (Jenkins, 2015). Therefore, it is likely that the learning of English cannot be separated from the understanding of multilingualism (Cenoz & Gorter, 2020).

Macaro (2001) argued that teachers often hold one of the three attitudes towards the use of L1 in L2 classrooms: (1) the virtual position: the goal is to create a classroom environment like the target country and there is no pedagogical value in L1; (2) the maximal position: the goal is to maximise the use of L2, but sometimes teachers have to use L1 although there is no pedagogical value in L1; (3) the optimal position: there is some pedagogical value in the use of L1 but this role needs to be further explored. In many EFL contexts, it has remained a dominant idea that the learning environment in ELT classrooms should be monolingual and some teachers can even feel a sense of guilt in allowing learners to use their L1 (Rabbidge, 2019).

#### **2.4.2 Translanguaging as a pedagogy in EFL classrooms**

Baker (2001) was one of the first scholars to suggest the possible benefits of translanguaging in education. First, it can help develop a fuller understanding of the subject matter. Second, it can help develop learners' competence in the weaker language. Third, it facilitates home-school collaboration as parents can help their children with the minority language. Last but not least, it is beneficial for the integration between English language learners and fluent English speakers. However, these are based on examples from the United States and the United Kingdom and some of these advantages may not be that evident in EFL classrooms. For example, in EFL contexts, students are less likely to have classmates who are L1 English speakers.

Researchers have started to explore the extent to which translanguaging is used in EFL classrooms across different contexts. For example, in Poland, the EFL teachers have not systematically involved the use of multiple languages in their lesson planning, although they acknowledge that the students' L1 can be a pedagogical resource (Sobkowiak, 2022). In Columbia, translanguaging has been used to connect students' cultures in the classrooms when students have the opportunity to share how they say the same word in their mother tongues (Ortega, 2019). In China, students seem to have used translanguaging naturally to express ideas more comfortably and to complete

lesson tasks (Gao, 2022). The EFL classrooms can also be bilingual or multilingual. Some classrooms have a more homogenous group of learners who share a similar L1 (Gao, 2022), while others have learners that speak different L1s (Hopp et al., 2021).

Moreover, the implementation of translanguaging as an EFL pedagogy is not limited to educational levels and age groups. It is also possible to target translanguaging for different tasks. For example, bringing out-of-classroom knowledge through translanguaging can motivate high school EFL students who are engaged in social media (Zhou, 2021). EFL learners in a Japanese university can use translanguaging in the planning stage of academic or creative writing to discuss unfamiliar words with each other (Turnbull, 2019).

However, it is still inconclusive whether translanguaging is more effective than an L2-only approach even though translanguaging can contribute to the EFL learning process. There is some evidence that translanguaging can improve EFL language proficiency compared to the monolingual groups. For example, Llanes and Cots (2020) found that Catalan/Spanish students taught through the translanguaging approach outperformed significantly the students taught through the monolingual approach in oral and writing performance in Business English. Similarly, Yuzlu and Dikilitas (2022) found that Turkish learners of English in the translanguaging group significantly outperformed those taught by the grammar-translation methods and communicative language approach in terms of four skill tests. Furthermore, the interviews with the participants also showed the constructive (meaning-making and developing autonomous learning), cognitive (metalinguistic awareness), interactive (authentic language use), and affective (sense of comfort and motivation) advantages of using translanguaging. However, Qureshi and Aljanadbah (2021) found that the translanguaging approach did not lead to an advantage in the overall score of reading comprehension among Arabic learners of English. Moreover, no significant difference was found in the scores of any type of question. This may be because the sample size is not large enough to detect any statistically significant differences. It can also be that translanguaging is not a significantly better approach to improving learners' English

proficiency.

## **2.5 Gaps in the literature**

There are still several gaps in the literature on translanguaging. First, there is a lack of systematic review that focuses on the use of translanguaging in EFL contexts. Prilutskaya (2021) conducted a systematic review of the use of translanguaging in ELT classrooms across various settings. In this review, only two search terms, “pedagogical translanguaging” and “classroom translanguaging”, were used to search the literature between 2011 and 2021 to capture as many relevant studies as possible. This systematic review included studies conducted in contexts described as complementary or heritage schools, dual language or bilingual classrooms, mainstream schools, sheltered classes for immigrants, content and language integrated learning (CLIL), English medium instruction (EMI), English as an additional language (EAL), English as a new language (ENL), ESL, and EFL. After the synthesis of 233 publications, the results showed that the majority of the contexts in translanguaging studies tend to be CLIL and EMI classrooms. In terms of their geographic settings, many studies explored translanguaging in Africa (39%), followed by Central America (21%), Australia and New Zealand (16%), and Asia (13%). However, no previous systematic reviews with a specific focus on EFL contexts have been conducted. In EFL contexts, learners’ exposure to English is usually limited to instructional settings (Barrot & Gabinete, 2021), making it different from other contexts. Therefore, in order to understand how translanguaging can be most effectively used in EFL classrooms, a more focused systematic review is needed.

Second, it is still unclear what kinds of research evidence exist addressing the role of translanguaging in improving English language proficiency. Prilutskaya’s (2021) systematic review reported that the majority of translanguaging (83%) has a qualitative research design, with 14% of the rest being quantitative and 3% mixed-methods. However, this systematic review did not provide a synthesis of the findings from the studies, although it is important to look into the studies and see what results in these studies have yielded. Moreover, there has been no consensus in terms of the effects of

translanguaging in ELT classrooms. Chalmers (2019) conducted a relevant systematic review of the role of L1-mediated pedagogies in L2 learning in primary schools. All but one of the included studies had English as the L2. Among the 10 studies included in the systematic review, six favoured the L1-mediated group over the group where L1 was not explicitly used. Two favoured the group with no explicit use of L1 and two found no significant difference between the two groups. However, among the six studies that favoured the L1-mediated group, five were rated as having a high risk of bias. It was concluded that the overall results appeared to be equivocal, and the advantages of L1 were more promising in teaching primary school students L2 vocabulary than teaching other skills. However, Chalmers (2019) focused on only primary school students, who are also usually at the beginner or intermediate level of English language learning. It is, therefore, important to assess the effects of translanguaging across different groups of learners.

Third, it is still difficult to know when and how can translanguaging be best used. Researchers have called for “a constant exploration of pedagogical principles (underpinned if possible by research evidence) regarding whether and in what ways L1 use is justified” (Macaro, 2022, p. 213). It is possible that studies that report the success of using translanguaging share some similar features in the way teachers implement translanguaging. However, there is a lack of research synthesis into not only what translanguaging approaches have been used but also the effects of these strategies. Due to individual and group differences among English language learners, it will also be beneficial if a systematic review can provide a summary of learner characteristics (age, L1, educational level) for the EFL teachers’ reference across different contexts.

## **2.6 The rationale for conducting this systematic review**

In summary, this systematic review is different from previous systematic reviews in the following aspects. First, it includes only studies that use the term “translanguaging” to describe the intervention to avoid ambiguity. This is because translanguaging has been established as a term different from other terms in bilingualism and bilingual

education. Although some interventions that used different terms in some studies may be perceived as translanguaging, there is insufficient evidence that the researchers have developed the interventions in these studies based on translanguaging theory. Therefore, this systematic review has an explicit focus on the translanguaging literature. Second, it highlights the contexts of ELT classrooms for EFL learners so that the systematic review can provide focused recommendations for EFL teachers and learners. Last but not least, this systematic review aimed to locate studies that report English language proficiency outcomes after translanguaging intervention, such as learning gains in vocabulary and grammar, in order to highlight the substantive educational effects of translanguaging.

## **Chapter Three Methodology**

### **3.1 Introduction**

This chapter introduces the two review questions, systematic review as a research method, and the steps of conducting this systematic review to address these two questions. It presents the early search, planning, and protocol registration of this systematic review. It then provides the inclusion/exclusion criteria, information sources, and search strategy. After that, it presents the data management, selection process, and data extraction. Finally, it discusses the assessment of the risk of bias in individual studies, data synthesis, and confidence in cumulative evidence.

### **3.2 Review questions**

This systematic review aims to synthesise research findings from studies that have investigated the effects of translanguaging approaches in EFL classrooms on English language proficiency. Specifically, it addresses two review questions:

- (1) What approaches of translanguaging have been assessed for effectiveness in EFL classrooms in all age phases (e.g. primary, secondary, tertiary and in language schools)?
- (2) What are the effects of these approaches on substantive educational outcomes?

### **3.3 Systematic review as a research method**

Compared to individual studies, reviews can usually provide a more comprehensive picture of a topic because they bring many individual studies together. Both traditional literature reviews and systematic reviews are reviews of literature. However, traditional literature reviews usually do not specify the methods used to identify, include and evaluate the studies that are included in the reviews (Gough et al., 2017). It is likely that some relevant studies are not included and the conclusions from traditional literature reviews are not drawn based on all available research.

A systematic review is different from traditional literature reviews in that it tries to overcome this bias with explicit, rigorous, and accountable methods (Gough et al., 2017) and follows transparent steps after careful and detailed planning (Petticrew & Roberts, 2006).

A systematic review is “a literature review that is designed to locate, appraise and synthesize the best available evidence relating to a specific research question in order to provide informative and evidence-based answers” (Dickson et al., 2017, p. 2). It was chosen as the research method to address the review questions. As a type of research synthesis, a systematic review aims to draw a conclusion about a research topic by collecting the totality of available empirical evidence (Li & Wang, 2018).

Systematic research synthesis as a research method has gained popularity in the field of applied linguistics (Norris & Ortega, 2007; Chong & Plonsky, 2021). Sato and Loewen (2019) found that EFL teachers expressed their willingness to use research to guide their teaching but they did not have sufficient time to find and read relevant studies. Systematic reviews can inform stakeholders such as teachers, students, and educational policymakers with research evidence in a condensed form, saving their time to learn about the most relevant research (Chong, 2019; Macaro, 2020).

### **3.4 Early scoping searches**

Before registering and conducting a new systematic review, it is important to search for whether there are existing reviews that have already addressed the intended review questions because it can reduce research waste (Chalmer & Glasziou, 2009). No previous reviews on the same review questions of this systematic review were found during early scoping searches on various databases in November 2021. Table 3.1 shows the databases searched during the planning stage of this systematic review with the keywords “EFL” or “translanguaging”. Thus, it was deemed appropriate to address this gap in the literature by conducting this systematic review. These databases were chosen because they are international databases of prospectively registered systematic reviews across different disciplines.

Table 3.1 Information sources of early scoping searches

Discipline	Database	Website
Education	International Database of Education Systematic Reviews (IDESR)	<a href="https://idesr.org/">https://idesr.org/</a>
	Database of Education Research provided by Evidence for Policy and Practice Information and Co-ordinating (EPPI) Centre, University College London	<a href="http://eppi.ioe.ac.uk/cms/">http://eppi.ioe.ac.uk/cms/</a>
Social science	Campbell Collaboration	<a href="http://www.campbellcollaboration.org/">www.campbellcollaboration.org/</a>
Multidisciplinary	PROSPERO provided by Centre for Reviews and Dissemination (CRD), University of York	<a href="http://www.crd.york.ac.uk/prospero/">www.crd.york.ac.uk/prospero/</a>
	Google Scholar	<a href="https://scholar.google.com/">https://scholar.google.com/</a>

### 3.5 Protocol registration

The protocol of this systematic review was written in the structure recommended by PRISMA-P (Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols) 2015 statement (Moher et al., 2015). The protocol was registered on IDESR on 18<sup>th</sup> February 2022. It is available to view at <https://idesr.org/article/IDESR000022> (and Appendix A). The reporting of this systematic review follows the guideline in PRISMA 2020 statement (Page et al., 2021).

### 3.6 Inclusion and exclusion criteria

The inclusion and exclusion criteria were developed to describe characteristics of the studies that should be included or excluded in this systematic review. For the purposes of this systematic review, EFL also included specific subfields of the

discipline, specifically, English for academic purposes (EAP) and English for specific purposes (ESP), as both have the main aim to improve English language proficiency. Studies in the contexts of EMI and CLIL were excluded because the types of lessons in these contexts were subject lessons rather than English language lessons. However, studies were not excluded because of the educational levels and language of publications so a wide range of dimensions in this topic were included. Table 3.2 presents the full inclusion and exclusion criteria and rationale.

Table 3.2 Inclusion and exclusion criteria

<b>Item</b>	<b>Inclusion/Exclusion criteria</b>	<b>Rationale</b>
<b>Reference</b>	Include studies with complete reference  Exclude studies without complete reference	Studies with complete reference can be easily located in databases.
<b>Time</b>	Include studies published between 2009 and 2021 (inclusive)  Exclude studies published before 2009	The term “translanguaging” was first used by García (2009) in the context of multilingual classrooms.
<b>Publication status</b>	No studies are excluded because of their publication status	All studies, both published and grey literature, were considered for inclusion to avoid publication bias and to promote epistemological diversity (Ortega, 2005).

<b>Language</b>	<p>No studies are excluded because of the language in which they are written</p> <p>Advanced language learners or translators will be consulted when the papers are in languages other than English and Chinese.</p>	<p>This systematic review aims to synthesise studies regardless of the language of publication.</p>
<b>Study type</b>	<p>Include research articles or book chapters that report on empirical data</p> <p>Exclude articles, chapters, or books that do not report on empirical data</p>	<p>This systematic review aims to synthesise empirical evidence.</p>
<b>Educational level</b>	<p>No studies are excluded because of the education level</p>	<p>This systematic review explores the implementation and effectiveness of translanguaging in EFL settings across educational levels.</p>
<b>Research context</b>	<p>Include studies in which the English language is the subject of teaching (including EFL, EAP, ESP lessons) in settings where English is not the language of the majority or one of the formal languages of the country</p> <p>Exclude studies where English is the medium of instruction for curriculum learning (such as CLIL, EMI, bilingual schools) and where English is the language of the majority or one of the formal</p>	<p>The focus of this systematic review is the teaching of the English language rather than the use of English to teach other subject contents.</p>

languages of the country (i.e. ESL)

<b>Participants</b>	<p>Include studies where the population is typically developing language learners of any age</p> <p>Exclude studies where the population is exclusively learners with special educational needs or developmental language disorders</p>	<p>This systematic review examines studies that address classrooms where the learners are target typically developing.</p>
<b>Outcomes</b>	<p>Include studies that report data on teachers' implementation and the substantive effects of translinguaging on English language proficiency.</p> <p>Exclude studies that do not report data on teachers' implementation and the substantive effects of translinguaging on English language proficiency. For example, studies that only report student or teacher perceptions of the effectiveness of translinguaging.</p>	<p>This systematic review focuses on English language proficiency as the learning outcome of translinguaging.</p>
<b>Intervention</b>	<p>Include studies that describe the intervention as "translinguaging"</p> <p>Exclude studies that do not describe the intervention as translinguaging</p>	<p>To ensure that the included empirical studies have been guided by translinguaging theory</p> <p>Note: this criterion clarifies the</p>

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(e.g. code-switching, cross- kinds of intervention  
linguistic comparison, etc.)

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### 3.7 Information sources

Table 3.3 shows the information sources by discipline. These databases included those which were searched in previous systematic reviews on similar topics. A research librarian in the Education Library at the University of Oxford was consulted to help the researcher refine the list of databases and to develop the search strategy. These databases cover research from education, linguistics, psychology, and other related fields. This is because applied linguistics is an interdisciplinary subject and the topic of translanguaging has its theoretical roots in different disciplines. Google Scholar was used to identify grey literature. The other bibliographic databases were accessed and searched electronically through the Search Oxford Libraries Online (SOLO) tool provided by the University of Oxford.

Table 3.3 Information sources of main search

<b>Discipline</b>	<b>Database</b>	<b>Platform</b>
Education	British Education Index	EBSCOhost
	Education Resources Information Center (ERIC)	EBSCOhost
	Education Abstracts	EBSCOhost
Linguistics	MLA International Bibliography	EBSCOhost
	Linguistics Collection	ProQuest
Psychology	PsyINFO	Ovid
Multidisciplinary	ProQuest Dissertations and Theses	ProQuest
	Web of Science Social Sciences Citation Index (SSCI) and Conference Proceedings Citation Index – Social Science & Humanities	Clarivate

### 3.8 Search strategy

The literature search has two phases, the main search and complementary searching to ensure that the search for the literature is comprehensive. As part of the main search, search terms were identified and used to search the bibliographic databases for literature published from 2009 to 2021 (inclusive). Search terms were combined with Boolean operators “AND” and “OR”. “AND” was used to search literature that contains terms from all the fields, while “OR” was used to allow the results pages to show literature with either one of the terms in each field. The wildcard (\*) was used to enable the searching of a word with different spelling. For example, the term “translanguag\*” could identify both “translanguage” and “translanguaging”. Table 3.4 displays the search terms. The search was conducted between 17<sup>th</sup> and 21<sup>st</sup> February, 2022. As the year of publication of the searches was limited to 2021, the dates of conducting the searches did not influence the search results.

Table 3.4 Search terms

Field	Purpose	Term/Boolean operator
Field 1	To identify the pedagogical practice	translanguag*  AND
Field 2	To identify the research context and participants	ELT OR “English language teach*” OR “English as a foreign language” OR EFL OR TESOL OR EAP OR ESP OR “teaching English to speakers of other languages” OR “English for academic purposes” OR “English for specific purposes”

		AND
Field 3	To identify	effect* OR outcome* OR score* OR benefit* OR
	learning	development* OR result*
	outcomes	

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After the main search and selection of the studies, citation chaining was conducted as complementary searching. This included both backward and forward searching. Backward searching involved reading through the reference list of each study that met all of the inclusion criteria to see if it listed any studies that looked as though they might meet the inclusion criteria but had not been located by the database search. Forward searching was to go through the list of studies that have cited that particular paper to find out any related articles, if available on the journal website.

### **3.9 Data management**

The data included references, the records of inclusion and exclusion decisions, data extraction forms, and the records of the research activity.

The references were stored in a systematic review tool. After searching databases, the titles, abstracts, years of publication, authors, and keywords of all the studies displayed in the results were exported as RIS files to Rayyan, a tool for viewing, selecting, and managing data in systematic reviews (Ouzzani et al., 2016). Rayyan was used to identify and remove duplicate references and categorise abstracts based on inclusion and exclusion decisions. The full papers obtained were also stored and screened in Rayyan.

The records of inclusion and exclusion decisions during the screening of titles and abstracts as well as during the screening of full papers were kept in Rayyan. The records included (1) the reference, (2) the decision at the title and abstract screening stage, (3) whether the full paper was obtained, and (4) the decision at the full-text screening stage, and the reason, if any, for exclusion.

The data extraction forms were stored in a Microsoft Word file. All the codes were

recorded in the same file.

In addition, the researcher kept a research activity journal on Microsoft Word weekly for an up-to-date record of data management. The journal included the date, research activity, notes, and important research outcomes such as the number of references excluded at each stage.

### **3.10 Selection process**

#### **3.10.1 Screening titles and abstracts**

After exporting the results to Rayyan, the researcher identified and removed any duplicate records. Then, the researcher applied inclusion and exclusion criteria to screen the titles and abstracts of each record. The researcher added keywords for inclusion and exclusion to help the process. When an abstract was excluded in Rayyan, the reason for exclusion was recorded. Only the studies that could not be excluded on the basis of the information contained in the abstract were kept, while studies that failed to meet any one of the inclusion criteria were excluded.

To reduce researcher bias and to ensure that the inclusion and exclusion criteria were applied successfully, a second reviewer, who majored in applied linguistics, was invited to screen a 5% ( $n = 224$ ) random sample of the titles and abstracts from the main search according to the inclusion and exclusion criteria of this systematic review. The second reviewer accessed the project via Rayyan to use its functions to make inclusion and exclusion decisions. The second reviewer had attended training sessions in systematic reviews and was doing a systematic review for her master's dissertation, so she was familiar with the screening process and the topic of translanguaging. An agreement rate of 88% was reached after the researcher and second reviewer screened the 5% sample of titles and abstracts independently. Then, the researcher and second reviewer discussed all the disagreements and agreed that the first review question and the outcome criterion (see Table 3.5 in section 3.9.2) should be modified to clarify uncertainty. After that, the researcher screened the rest of 95% of the titles and abstracts

independently.

### 3.10.2 Obtaining and screening full papers

After the screening of titles and abstracts, the full papers of all potentially eligible studies were obtained. However, when going through the titles and abstracts again, the reviewer found that some studies involved approaches that might belong to translanguaging but were not termed as translanguaging. For example, some studies used “translation” and “crosslinguistic comparison” to describe the intervention. Therefore, after discussing with the supervisor and the second reviewer, the reviewer decided that another criterion for intervention should be added. This change was made after the screening of titles and abstracts was completed but before the stage of full-text screening. Table 3.5 shows the revisions of the first review question and two criteria.

The full papers were screened according to the revised inclusion and exclusion criteria. The same second reviewer was invited to screen a 30% ( $n = 9$ ) random sample of the full papers to confirm the inclusion of the full-text citations was consistent with the inclusion and exclusion criteria. The reasons for excluding any papers were recorded in Rayyan. An agreement rate of 100% was reached after the researcher and second reviewer screened the 30% sample of full papers independently. Then, the researcher screened the rest of the full papers independently.

Table 3.5 Revisions of the first review question and inclusion/exclusion criteria

Item	Before	After	Rationale
Review question 1	How do teachers implement translanguaging in EFL classrooms in all age phases (e.g. primary, secondary, tertiary and in language schools)?	What approaches of translanguaging have been assessed for effectiveness in EFL classrooms in all age phases (e.g. primary, secondary, tertiary and in	The first review question was changed to make it focused enough. Otherwise, it would include many studies that only have reported the

		language schools)?	translanguaging approaches but not have assessed learning outcomes.
Outcomes	<p>Include studies that report data on either teacher’s implementation and/or the substantive effects of translanguaging on English language proficiency.</p> <p>Exclude studies that do not report data on teachers’ implementation and/or the substantive effects of translanguaging on English language proficiency. For example, studies that only report student or teacher perceptions of the effectiveness of translanguaging.</p>	<p>Include studies that report data on both teacher’s implementation and the substantive effects of translanguaging on English language proficiency.</p> <p>Exclude studies that do not report data on both teachers’ implementation and the substantive effects of translanguaging on English language proficiency. For example, studies that only report student or teacher perceptions of the effectiveness of translanguaging.</p>	<p>As the first review question was modified, the criterion of the outcomes should also be made clear to include studies that report both the translanguaging implementation and its effects.</p> <p>Although the only search term related to the intervention was “translanguag*”, studies that describe the intervention as code-switching and cross-</p>
Intervention	<p>This criterion was added after the screening of titles and abstracts</p>	<p>Include studies that describe the intervention as “translanguaging”</p> <p>Exclude studies that do not describe the intervention as code-switching (e.g. code-</p>	<p>Although the only search term related to the intervention was “translanguag*”, studies that describe the intervention as code-switching and cross-</p>

switching, cross-linguistic linguistic comparison also  
comparison, etc.) appeared in the search  
results. The reason might  
be that translanguaging  
has been discussed in the  
literature review of some  
studies. To avoid  
confusion, this systematic  
review only included  
studies that have described  
the intervention as  
translanguaging.

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### **3.11 Data extraction**

A data extraction form in a Microsoft Word document was adapted from previous systematic reviews in applied linguistics (Macaro et al., 2012, 2018), as shown in Appendix B. This data extraction form was piloted with five included studies, and then revised and finalised.

The general information of the studies was recorded, including reference, source, language, publication type and source of funding. Then, two types of data were extracted: descriptive data and analytical data. The descriptive data were data that described the context, participants and methods, while analytical data were data that were crucial to help answer the review questions. The analytical data were the pedagogical translanguaging approach(es) and the learning outcomes. The learning outcomes were quantitative measurements of students' English language proficiency, including means, standard deviations, and effect sizes.

### **3.12 Quality assessment of individual studies**

Quality appraisal of individual studies was conducted after data extraction. In this stage, the risk of bias or the methodological quality of each individual study was assessed. The quality of a study means “the extent to which a study is free from the main methodological biases (such as selection bias, response bias, attrition bias, and observer bias)” (Petticrew & Roberts, 2006, p. 127).

Gorard’s Sieve (Gorard, 2015) was used as the assessment tool to evaluate the design, scale, dropout, outcomes, fidelity, and validity of these studies, as shown in Table 3.6. This tool was chosen because it has been widely used in educational research (e.g. El Soufi & Huat See, 2019; Huat See & Gorard, 2015) for examining the risk of bias of individual studies. Each study was assigned a rating ranging from 4\*, meaning the study has provided the most trustworthy type of evidence, to 0, meaning the study cannot be said to have addressed sources of bias adequately, or at all. The assessment followed the column from left to right and top to bottom. That is, the design of a study was the first to be assessed and it would fall into one row in the Design column that could best describe the quality of the design. Then, the process was repeated for the next five categories. Lastly, the rating would be assigned according to the lowest column in all the six categories. For example, when a study belonged to one of the lowest row in either of the categories, it would be rated 0 regardless of how good its other qualities could be. In other words, “an evaluation will be judged to be as good as the lowest classification it has achieved for each of the six categories” (Gorard, 2015, p. 6).

Table 3.6 A ‘Sieve’ to assess the trustworthiness of individual studies (Gorard, 2015)

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Rating</b>
Fair design for comparison	Large number of cases per comparison group	Minimal attrition, no evidence of impact on findings	Standardised pre-specified independent outcome	Clear intervention, uniform delivery	No evidence of diffusion or other threat	4★
Balanced comparison	Medium number of cases per comparison group	Some initial imbalance or attrition	Pre-specified outcome, not standardized or not independent	Clear intervention, unintended variation in delivery	Little evidence of diffusion or other threat	3★
Matched comparison	Small number of cases per comparison group	Initial imbalance or moderate attrition	Not pre-specified but valid outcome	Unclear intervention, with variation in delivery	Evidence of experimenter effect, diffusion or other threat	2★
Comparison with poor or no equivalence	Very small number of cases per comparison group	Substantial imbalance and/or high attrition	Outcome with issues of validity or appropriateness	Poorly specified intervention	Strong indication of experimenter effect, diffusion or other threat	1★
No report of comparator	A trivial scale of study, or N unclear	Attrition not reported or too high for any	Too many outcomes, weak measures, or	No clearly defined intervention	No consideration of threats to validity	0

### **3.13 Data synthesis**

A narrative synthesis was used to synthesise the data. Narrative synthesis refers to a method that mainly uses words and texts to summarise and explain the results of a systematic review (Popay et al., 2006). Popay et al. (2006) suggested the narrative synthesis process should go through the four elements: (1) developing a theory of how the intervention works, why and for whom, (2) developing a preliminary synthesis of findings of included studies, (3) exploring relationships in the data, and (4) assessing the robustness of the synthesis. Thematic analysis was used as one technique for developing preliminary synthesis. In the present systematic review, the themes were the teaching or assessment focus of the studies, such as vocabulary, grammar, reading, and writing.

As there were not enough similar studies that used the same design and same ways of measurement, no meta-analysis was not conducted in the present systematic review.

### **3.14 Confidence in cumulative evidence**

The confidence in cumulative evidence was assessed using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach. GRADE approach offers “a system for rating quality of evidence in systematic reviews and guidelines and grading strength of recommendations in guidelines” (Guyatt et al., 2011, p. 384). GRADE classifies evidence into four levels, high, moderate, low, and very low, as explained in Table 3.7. The confidence in cumulative evidence could decrease because of risk of bias, inconsistency, indirectness, or imprecision.

Table 3.7 GRADE categories of the certainty of the evidence (Zhang et al., 2019)

Quality Level	Definition
High	The researcher is very confident that the true effect lies close to that of the estimate of the effect.
Moderate	The researcher is moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
Low	The researcher's confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.
Very low	The researcher has very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

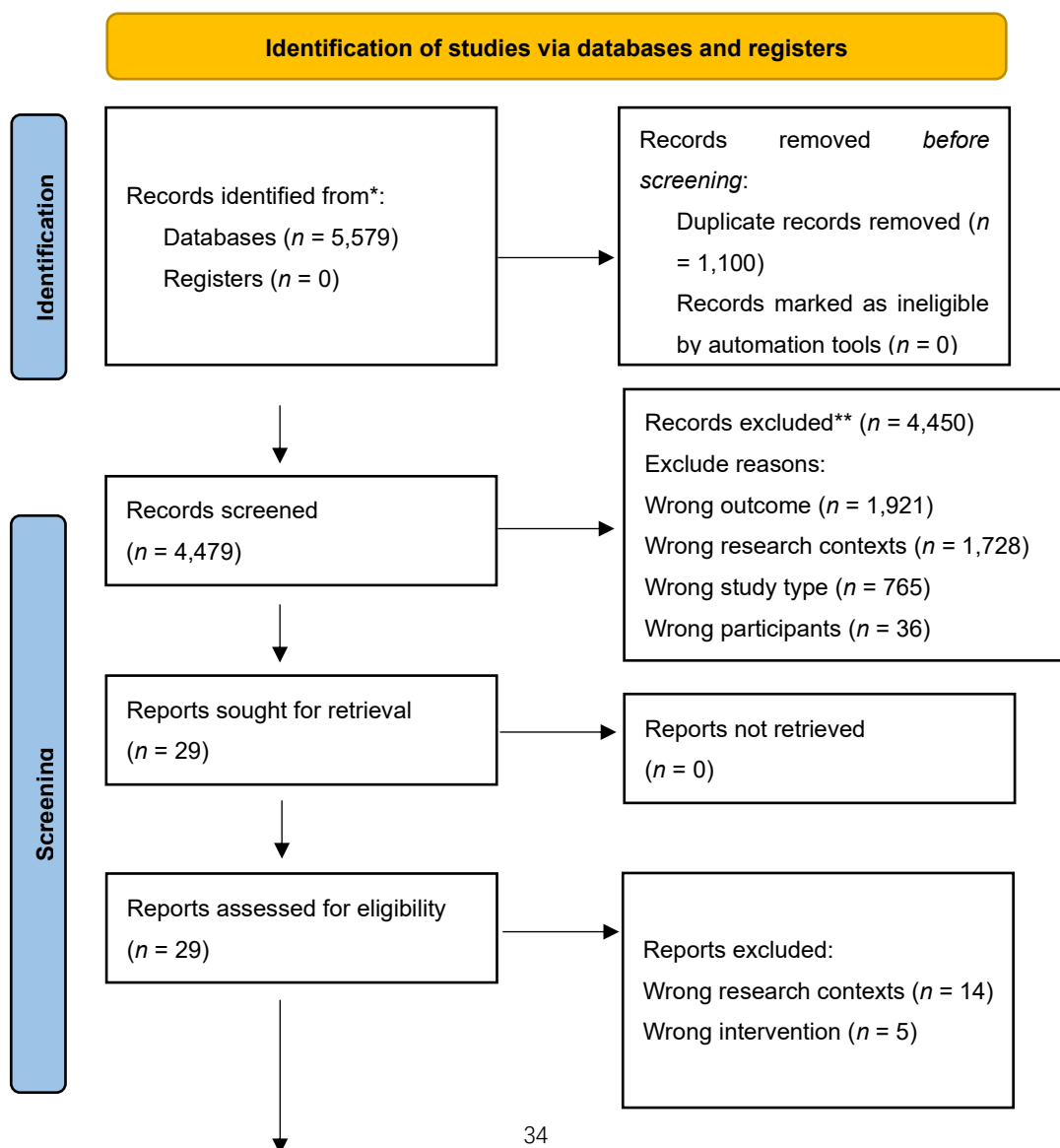
# Chapter Four Results

## 4.1 Introduction

This chapter first presents the study selection process and included studies, then introduces the study characteristics. It then shows the risk of bias assessment of individual studies, followed by the results of syntheses. This chapter ends with the confidence in cumulative evidence using the GRADE approach.

## 4.2 Study selection

The selection process is presented in Figure 4.1, following the PRISMA guideline for reporting systematic reviews (Page et al., 2021).



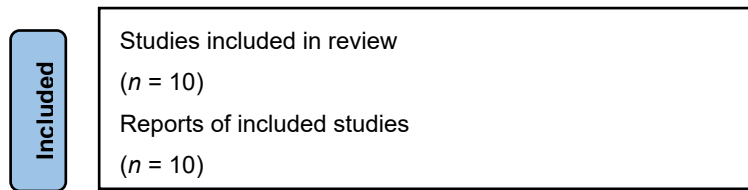


Figure 4.1 Study selection process

The databases returned 5,579 records. Of these, 1,100 were duplicates and were removed before the screening. Subsequently, 4,479 records were screened for titles and abstracts. Among them, 4,450 records were excluded either because they did not report the implementation of translanguaging and its language proficiency outcomes ( $n = 1,921$ ), they were not conducted in EFL contexts ( $n = 1,728$ ), they were not empirical research ( $n = 765$ ), or their participants were not typically developing students ( $n = 36$ ). After this stage, 29 records were left for full-text screening. Among them, 19 records were excluded either because the studies were not conducted in EFL settings with the aim to teach the English language ( $n = 14$ ) or did not describe the intervention as translanguaging ( $n = 5$ ). Finally, 10 studies were included for synthesis.

### 4.3 Included studies

The following studies were included for synthesis:

- (1) Abdulaal, M. A. A. D. (2020). A shift from a monoglossic to a heteroglossic view: Metalinguistic stego-translanguaging lens approach. *Arab World English Journal*, 11(4), 461-473. <https://dx.doi.org/10.24093/awej/vol11no4.29>
- (2) Hopp, H., Kieseier, T., Jakisch, J., Sturm, S., & Thoma, D. (2021). Do minority-language and majority-language students benefit from pedagogical translanguaging in early foreign language development?. *Multilingua*, 40(6), 815-837. <https://doi.org/10.1515/multi-2020-0164>
- (3) Hopp, H., & Thoma, D. (2021). Effects of plurilingual teaching on grammatical development in early foreign - language learning. *The Modern Language*

- Journal*, 105(2), 464-483. <https://doi.org/10.1111/modl.12709>
- (4) Llanes, À., & Cots, J. M. (2020). Measuring the impact of translanguaging in TESOL: A plurilingual approach to ESP. *International Journal of Multilingualism*, 1-16. <https://doi.org/10.1080/14790718.2020.1753749>
- (5) Nur, R., Namrullah, Z., Syawal, S., & Nasrullah, A. (2020) Enhancing reading comprehension through translanguaging strategy. *Journal of Language Teaching and Research*, 11(6), 970-977. <http://dx.doi.org/10.17507/jltr.1106.14>
- (6) Qureshi, M. A., & Aljanadbah, A. (2021). Translanguaging and reading comprehension in a second language. *International Multilingual Research Journal*, 1-11. <https://doi.org/10.1080/19313152.2021.2009158>
- (7) Sano, A. (2018). The effects of translanguaging in discussion as a prewriting activity for writing in a second language. *ARELE: Annual Review of English Language Education in Japan*, 29, 193-208. [https://doi.org/10.20581/arele.29.0\\_193](https://doi.org/10.20581/arele.29.0_193)
- (8) Tang, H., & Peng, Q. (2019). Experimental research in phonics classroom instruction of low-grade elementary students from the perspective of translanguaging. In *6th International Conference on Education, Language, Art and Inter-cultural Communication (ICELAIC 2019)* (pp. 147-151). Atlantis Press. <https://doi.org/10.2991/assehr.k.191217.098>
- (9) Turnbull, B. (2019). Translanguaging in the planning of academic and creative writing: A case of adult Japanese EFL learners. *Bilingual Research Journal*, 42(2), 232-251. <https://doi.org/10.1080/15235882.2019.1589603>
- (10) Yuzlu, M. Y., & Dikilitas, K. (2021). Translanguaging in the development of EFL learners' foreign language skills in Turkish context. *Innovation in Language Learning and Teaching*, 16(2), 176-190. <https://doi.org/10.1080/17501229.2021.1892698>

#### 4.4 Study characteristics

Table 4.1 summarises the characteristics of the included studies, including

publication status, location, study design, intervention duration, sample size, educational level, participants' grade/age (years), the learners' languages other than English, assessment focus, and the results.

Table 4.1 Summary of the characteristics of included studies

Studies	Publication status	Location	Study design (RCT=randomised controlled trial)	Intervention duration	Sample size (f=females)	Education level	Grade/age (years)	Learners' languages other than English	Assessment focus	Results
Abdulaal (2020)	Journal article	Egypt	Experimental (pretest-posttest)	4 weeks	63 (f=39)	University	19-24 years old	Arabic	Reading and Writing	Favoured translanguageing group
Hopp et al. (2021)	Journal article	Germany	RCT (pretest-posttest - delayed-posttest)	23 weeks	128 (gender not reported)	Primary school	4 <sup>th</sup> grade	German and other various L1s (exact L1s not reported)	Vocabulary, grammar, phonological awareness, metalinguistic awareness	No significant differences found between the intervention and control groups on any measure
Hopp & Thoma (2021)	Journal article	Germany	RCT (pretest-posttest)	45 minutes (part of a six-month	258 (gender not reported)	Primary school	9-10 years old	German and 15 different	Grammar	Favoured intervention group in one

				longer interventio n)				home languages		measure in Study 1. No significant differences between the intervention and control groups in Study 2
Llanes & Cots (2020)	Journal article	Spain	Experimental (pretest-posttest)	16 weeks	54 (f=27)	University	Mean age = 19.72 years	Catalan and Spanish	Writing and speaking	Favoured intervention group in some measures
Nur et al. (2020)	Journal article	Indonesia	RCT (pretest-posttest)	Not specified	35 (gender not reported)	Secondary school	8 <sup>th</sup> grade	Indonesian	Reading	Favoured intervention group
Qureshi & Aljanadba h (2021)	Journal article	United Arab Emirates	Experimental (posttest only)	One class session	65 (all male)	University	2 <sup>nd</sup> to 4 <sup>th</sup> year in university	Arabic	Reading	No significant differences found

											between the intervention and control groups on any measure
Sano (2018)	Journal article	Japan	Cohort (the same participants wrote essays under four conditions)	1 hour	2 (f=1)	University	Not reported	Japanese	Writing	No advantages found in essay length or vocabulary variation	
Tang & Peng (2019)	Conference proceeding	China	Experimental (pretest-posttest)	4 months	6 (f=3)	Primary school	7 years old	Chinese	All the four skills	Favoured intervention group	
Turnbull (2019)	Journal article	Japan	Experimental (a single writing task)	1 hour	60 (f=28)	University	18-20 years old	Japanese	Writing	Favoured intervention group	
Yuzlu & Dikilitas (2021)	Journal article	Turkey	RCT (pretest-posttest)	10 weeks	120 (gender not reported)	Secondary school	14-17 years old	Turkish	All the four skills	Favoured intervention group	

#### 4.4.1 Year of publication and publication status

Figure 4.2 shows the number of publications per year and publication status. Although the search aimed to locate studies from 2009 to 2021 (inclusive), it was only until 2018 that the first empirical study<sup>7</sup> on the effects of pedagogical translanguaging in EFL contexts was published. After that, two studies<sup>8,9</sup> were published in 2019, three in 2020<sup>1,4,5</sup>, and four in 2021<sup>2,3,6,10</sup>. Overall, there has been an upward trend in publications on the effects of pedagogical translanguaging in EFL contexts.

Nine<sup>1,2,3,4,5,6,7,9,10</sup> out of the ten included studies were journal articles. One study<sup>8</sup> was a conference proceeding.

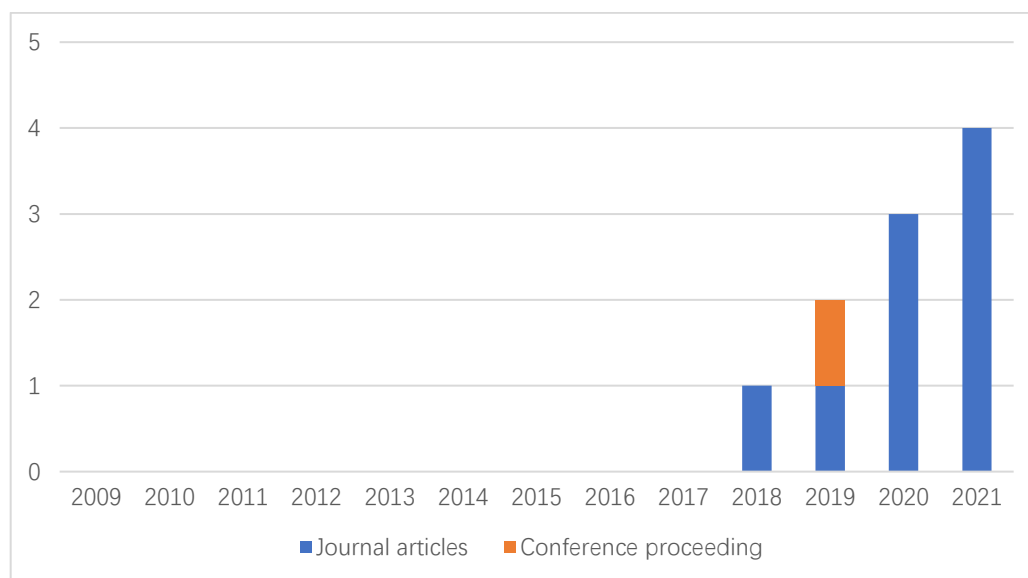


Figure 4.2 Number of publications per year and publication status

#### 4.4.2 Location

Two studies<sup>2,3</sup> were conducted in Germany and two<sup>7,9</sup> studies were in Japan. The rest of the six studies were conducted in six different countries: China<sup>8</sup>, Egypt<sup>1</sup>, Indonesia<sup>5</sup>, Spain<sup>4</sup>, Turkey<sup>10</sup>, and United Arab Emirates<sup>6</sup>.

#### 4.4.3 Study design

All but one study were experimental studies. Among the nine experimental studies, four studies<sup>2,3,5,10</sup> were randomised control trails, where they randomly assigned the

intact classes as the intervention group or control group. Four studies<sup>1,4,6,8</sup> did not report how participants were allocated to groups. One study<sup>9</sup> randomly assigned the participants into academic or creative writing groups but did not explicitly state how the participants were further assigned to three different conditions in each writing group.

One study was cohort study<sup>7</sup>, where the same participants took part in four different conditions.

#### **4.4.4 Duration of intervention**

The duration of the intervention ranged from a single experiment session to 23 weeks. One study<sup>5</sup> did not report the exact length of the intervention. The intervention period for one study<sup>2</sup> was 23 weeks, and a delayed post-test was administered three months after the intervention. This was the only study with a delayed post-test.

#### **4.4.5 Sample size**

The sample size ranged from two to 258 participants. The study with the smallest sample size<sup>7</sup> only involved two participants. Another small-scale study<sup>8</sup> had six participants. The sample sizes of five studies<sup>1,4,5,6,9</sup> were larger than 30 but smaller than 100 participants. Three studies<sup>2,3,10</sup> had sample sizes larger than 100 participants.

#### **4.4.6 Educational level**

Figure 4.3 shows the number of publications by educational level. Three studies<sup>2,3,8</sup> were conducted with primary school students. Among them, two<sup>2,3</sup> were conducted in regular primary schools and one<sup>8</sup> was in an English training school. Two studies<sup>5,10</sup> were conducted in secondary schools. The remaining five studies<sup>1,4,6,7,9</sup> were all conducted in universities.

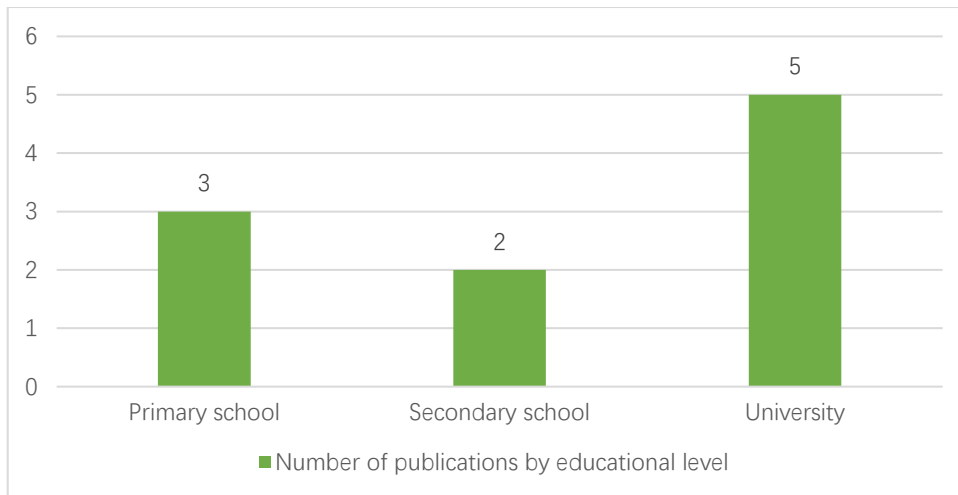


Figure 4.3 Number of publications by educational level

#### 4.4.7 Age and gender

The youngest participants were 7 years old<sup>8</sup>. Two studies<sup>2,3</sup> involved pupils aged from 9 to 10 years. Two studies<sup>5,10</sup> involved teenagers aged from 14 to 17 years. Five studies<sup>1,4,6,7,9</sup> involved adults aged from 18 to 24 years.

Half of the included studies<sup>1,4,7,8,9</sup> had relatively balanced gender in their sample. In one study<sup>6</sup>, all the participants were male. Four studies<sup>2,3,5,10</sup> did not report the gender of the participants.

#### 4.4.8 Participants' linguistic backgrounds

Figure 4.4 shows the frequency of languages that were participants' already acquired languages when they learned English. The number of studies<sup>1,3,6</sup> in which Arabic was the L1 of participants was 3, followed by Chinese<sup>3,8</sup>, German<sup>2,3</sup>, Indonesian<sup>3,5</sup>, Japanese<sup>7,9</sup>, Spanish<sup>3,4</sup>, and Turkish<sup>3,10</sup>.

Two studies<sup>2,3</sup> had participants that spoke various L1s, while in the rest of the studies, the participants shared the same L1<sup>1,4,5,6,7,8,9,10</sup>, or L1s (Catalan and Spanish)<sup>4</sup>.

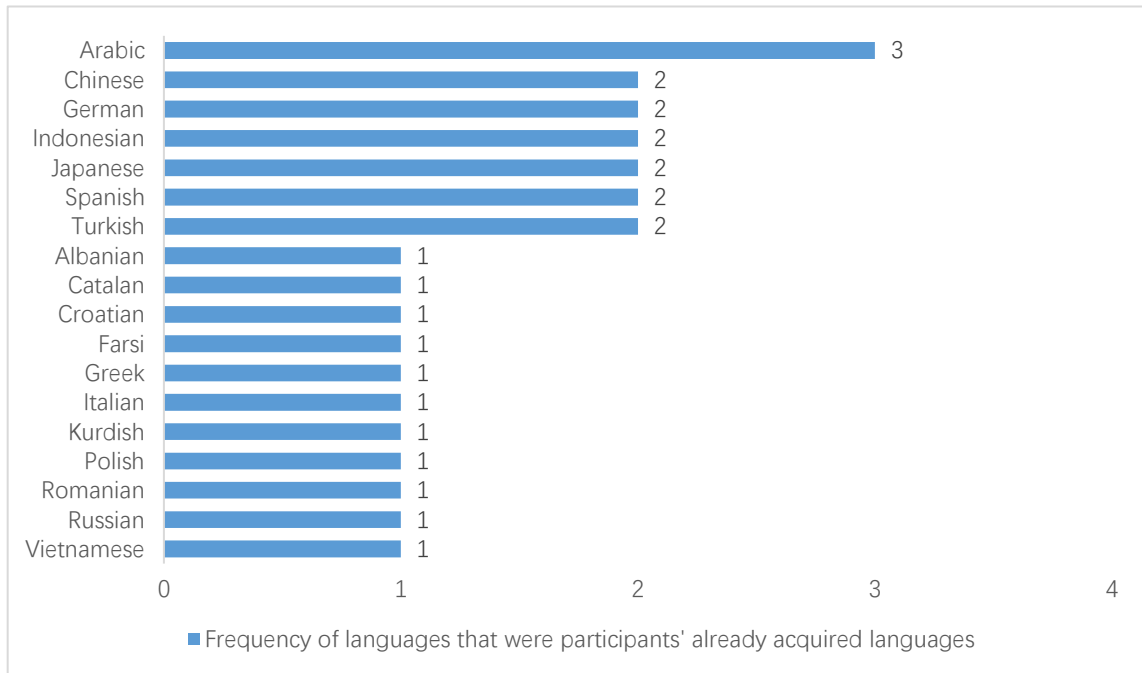


Figure 4.4 The number of studies in which the language was the L1 of participants

#### 4.4.9 Assessment focus

Figure 4.5 shows the assessment focus. Writing<sup>1,4,7,9</sup> was the most frequent assessment focus, followed by reading<sup>1,5,6</sup> and grammar<sup>2,3</sup>. Two studies<sup>8,10</sup> assessed overall English proficiency. One study<sup>2</sup> assessed vocabulary and one study<sup>4</sup> focused on speaking together with writing. No studies focused only on listening.

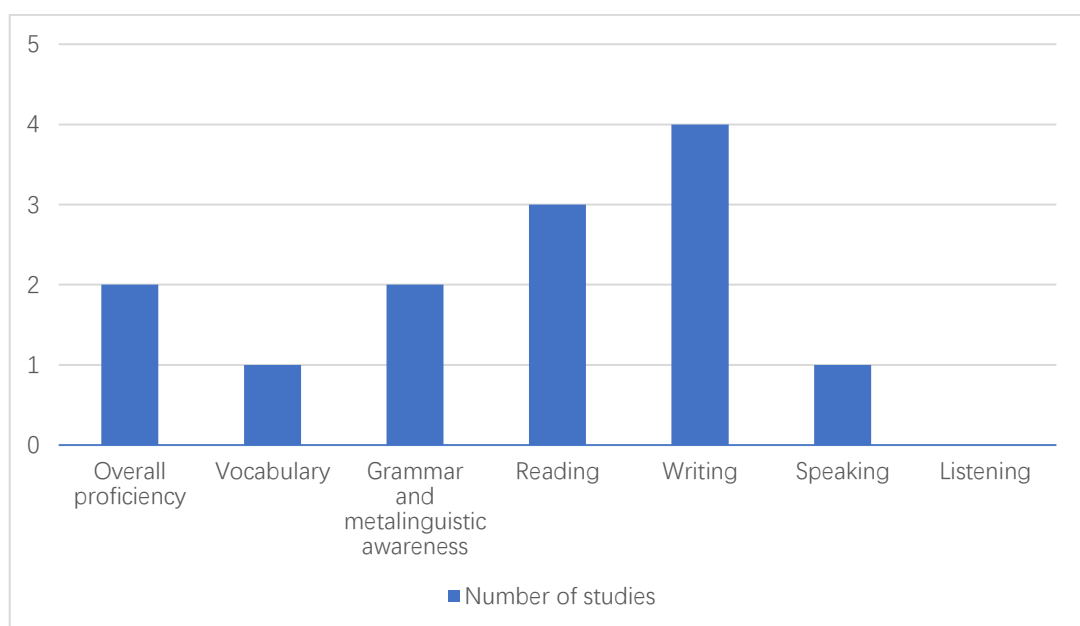


Figure 4.5 Assessment focus of the studies

#### 4.5 Quality assessment of included studies

Table 4.2 shows a summary of the quality assessment of individual studies using Gorard's Sieve (Gorard, 2015). This assessment tool was described in section 3.10. Each column was rated from 0 to 4\*. *Design* was rated based on how much evidence was available that the two groups were comparable from the beginning of the study. *Scale* was rated in terms of sample size per group. *Dropout* was rated based on the level of attrition and its impact on findings. *Outcomes* was rated based on how the outcomes were measured (for example, whether standardised tests were used). *Fidelity* was rated according to the level of clarity of intervention and delivery. *Validity* was rated based on how well the results could be representative of the similar EFL learners that were not involved in the studies. The overall rating was informed by the lowest rating for any one section, as per Gorard (2015). That is, for example, if a study is of a trivial scale, any higher ratings are irrelevant as the trustworthiness of the study is already compromised.

Two<sup>2,3</sup> studies were rated 3\*, meaning that their overall quality was high. Two<sup>4,10</sup> studies were rated 2\* (moderate quality) and the rest of the studies<sup>1,5,6,7,8,9</sup> were rated 1\* or below (low quality).

Appendix C presents the detailed data extraction tables and risk of bias assessment for individual studies.

Table 4.2 Summary of quality assessment of individual studies

Reference	Design	Scale	Dropout	Outcomes	Fidelity	Validity	Overall Rating
Abdulaal (2020)	2★	2★	4★	1★	1★	1★	1★
Hopp et al. (2021)	4★	3★	3★	4★	3★	3★	3★
Hopp & Thoma (2021)	4★	3★	3★	4★	4★	3★	3★
Llanes & Cots (2020)	2★	2★	4★	3★	3★	2★	2★
Nur et al. (2020)	3★	2★	4★	1★	0	1★	0
Qureshi & Aljanadbah (2021)	2★	2★	4★	1★	4★	1★	1★
Sano (2018)	2★	0	4★	1★	4★	1★	0
Tang & Peng (2019)	2★	0	4★	1★	1★	1★	0
Turnbull (2019)	2★	1★	4★	2★	4★	1★	1★
Yuzlu & Dikilitas (2021)	3★	2★	4★	2★	3★	2★	2★

## **4.6 Results of syntheses**

### **4.6.1 Review question 1: What approaches of translanguaging have been assessed for effectiveness in EFL classrooms in all age phases (e.g. primary, secondary, tertiary and in language schools)?**

#### **4.6.1.1 Terms to describe the intervention**

There is some variation among the included studies in the terms used to describe the approaches of pedagogical translanguaging. Table 4.3 shows the terms used in the studies to describe the intervention and the approaches that the intervention has been compared to. All the included studies used the word “translanguaging” in relation to the intervention. However, some studies differentiated between different forms of translanguaging, while others did not. Some studies also used other terms in addition to translanguaging, such as plurilingual and translingual approaches, to describe the same intervention.

Abdulaal (2020) proposed a new term of stego-translanguaging (stego means “cover”). This study used stego-translanguaging to refer to the indirect use of L1. The intervention (providing background reading in L1) was described as stego-translanguaging rather than translanguaging. The researcher referred to translanguaging as the direct employment of the mother tongue. However, since the study discussed mostly translanguaging in its theoretical framework, it was included for synthesis.

Turnbull (2019) differentiated weak and strong forms of translanguaging. According to Turnbull (2019), the weak form of translanguaging was what Williams (1996) suggested; that is, using the two languages separately. The strong form of translanguaging followed what García and Li (2014) suggested as the use of all languages freely. This study is the only included study that had two groups related to translanguaging, one weak translanguaging group and one strong translanguaging group.

Two studies (Hopp et al., 2021; Hopp & Thoma, 2021) used the term pedagogical translanguaging. Three terms (heteroglossic, plurilingual, or translingual pedagogy) across four different studies (Abdulaal, 2020; Hopp & Thoma, 2021; Llanes & Cots, 2020; Qureshi & Aljanadbah, 2021) were used as equivalence to translanguaging in the description of the intervention.

Table 4.3 Summary of terms used in the studies to describe the intervention

<b>Study</b>	<b>Term(s) to describe the intervention</b>	<b>Term(s) to describe the approach(es) that were compared to the intervention</b>
Abdulaal (2020)	Stego-translanguaging (the indirect use of L1)/a heteroglossic pedagogy	Non-plurilingual monolingual approach/a monoglossic pedagogy
Hopp et al. (2021)	Pedagogical translanguaging	Target-language-only EFL teaching
Hopp & Thoma (2021)	Pedagogical translanguaging/ plurilingual FL teaching	Regular FL-only teaching
Llanes & Cots (2020)	Translanguaging/plurilingual pedagogy	Monolingual approach
Nur et al. (2020)	Translanguaging strategy	Translation strategy
Qureshi & Aljanadbah (2021)	Translanguaging/translingual condition	Non-translingual condition/English-only condition
Sano (2018)	Prewriting discussion under translanguaging condition	No prewriting discussion, prewriting discussion in English, prewriting discussion in Japanese
Tang & Peng (2019)	Translanguaging	English-only classroom
Turnbull (2019)	Weak form of translanguaging (Japanese for the discussion, English for the writing task), strong form of translanguaging (use any languages for discussion and planning)	Monolingual English-only practices
Yuzlu & Dikilitas (2021)	Translanguaging pedagogy	Grammar-translation methods, communicative language approach

#### **4.6.1.2 Characteristics of these approaches**

Table 4.4 summarises the key pedagogical translanguaging approaches in the studies. These are the most relevant approaches to how the participants have been assessed. However, it should be noted that some studies lasted for a relatively long time and not every approach during the intervention has been reported. For example, Hopp et al (2021) lasted for six months and delivered 36 multilingual activities.

One common characteristic of these approaches is that students' L1s were used as pedagogical resources. The majority language of the society or the learners' L1s were usually used to raise metalinguistic awareness, to provide background knowledge, and for linguistic support.

These approaches have been used for a variety of teaching purposes. Although many aspects of EFL learning were covered, more research focused on vocabulary, grammar, reading and writing than speaking and listening.

These approaches have been used for different interaction patterns. Some approaches involved the teacher's talking to the whole class, such as comparing, illustrating, and providing examples (Hopp et al., 2021; Llanes & Cots, 2020), while others highlighted teacher's attention to the individual characteristics of the students, such as inviting learners to say the target sentence in their L1s (Hopp & Thoma, 2021). Still others were used in interactions among students during peer work or group work (Qureshi & Aljanadbah, 2021; Turnbull, 2019).

#### **4.6.1.3 Assessment of effectiveness of these approaches**

Overall, there is a lack of studies that use regionally, nationally, or internationally standardised tests to assess the effects of pedagogical translanguaging. Most instruments of the included studies were designed by the researchers who conducted the studies. The exceptions were Abdulaal (2020), Sano (2018), and Hopp et al. (2021). Abdulaal (2020) and Sano (2018) used tasks from International English Language Testing System (IELTS). Hopp et al. (2021) adapted instruments from previous studies for most tasks, except that the rhyming tasks and metalinguistic awareness tasks in the interviews were designed by the researchers.

There is diversity in terms of how the effectiveness was assessed. Some studies (e.g.

Abdulaal, 2020; Turnbull, 2019) assessed the effectiveness of one specific approach using the test of the corresponding skill, while others assessed the overall effects of more than one approach (e.g. Hopp et al., 2021; Llanes & Cots, 2020). One study (Teng & Peng, 2019) delivered the intervention in one type of lesson (phonics lesson) but assessed the effects on overall English proficiency.

There is also a lack of assessment of the long-term influence of pedagogical translanguaging. Only one included study (Hopp et al., 2021) conducted a delayed post-test, which was delivered three months after the intervention.

Table 4.4 Summary of key pedagogical translanguaging approaches that have been assessed for effectiveness in EFL classrooms

<b>Teaching focus</b>	<b>Pedagogical translanguaging approach</b>	<b>Sample research</b>	<b>Details of the approach provided by the studies</b>	<b>Instruments to assess the effectiveness of the approach in the sample research</b>
<b>Overall proficiency</b>	A combination of translanguaging approaches across skills	Yuzlu & Dikilitas (2021)	Bilingual materials, language partners, prewriting using all linguistic resources	All skill tests (listening, reading, writing, speaking)
<b>Vocabulary</b>	Comparing languages	Hopp et al. (2021)	The teacher introduced cognates between English and other languages	A receptive vocabulary test and a productive vocabulary test
<b>Grammar and metalinguistic awareness</b>	Comparing languages	Hopp et al. (2021)	The teacher implemented activities that compare grammar in English and other languages	A receptive grammar test and post-intervention interviews on metalinguistic awareness
	Illustrating in the majority language	Hopp & Thoma (2021)	The teacher wrote the target sentences in English on the blackboard but explained them in German (the majority language)	Tests prepared by the researchers where students circled the right answers in a booklet with pictures
	Inviting learners to contribute examples in other L1s		The teacher let the student say and write the same questions and sentences in their minority languages	
<b>Phonics and phonological awareness</b>	Organising phonological awareness activities	Hopp et al. (2021)	The teacher led the students to practice rhymes, chants, and substitution of word-initial sounds	Phoneme manipulation and rhyming tasks

	Using English, L1, and visual or audio aids together	Tang & Peng (2019)	The teacher used English, Chinese, and material objects of pictures, video, radio, body language and any other language sign	All skill tests (listening, reading, writing, speaking, viewing) but the skill of viewing was not specified
<b>Reading</b>	Providing background reading in L1	Abdulaal (2020)	Students read about the topics in Arabic before the tasks	An IELTS reading comprehension task (three texts, 40 questions, 60 minutes)
	Allowing translanguaging in summary writing and peer discussion	Qureshi & Aljanadbah (2021)	The students wrote summaries and discussed their summaries with peers using any languages they wanted	A reading comprehension task (one text, three question types, 22 questions)
	Providing L1 glossary		The L1 meanings of key terms were provided	
<b>Writing</b>	Allowing L1 for all interactions and tasks	Llanes & Cots (2020)	The teacher would respond in the students' L1 if they asked the question in L1	A business letter writing task
	Giving similar examples in L1		The teacher gave examples of similar text situations in L1	
	Involving L1 in prewriting discussion	Turnbull (2019)	The students may use L1 to discuss and plan their essays with peers	Academic and creative writing tasks
<b>Speaking</b>	Giving similar examples in L1	Llanes & Cots (2020)	The teacher gave examples of similar communicative situations in L1	An oral sales pitch task
<b>Listening</b>	Involving L1 in listening instructions	Yuzlu & Dikilitas (2021)	The teacher used bilingual characters for dialogues and stories and led students to try listening stations in L1	All skill tests (listening, reading, writing, speaking)

#### **4.6.2 Review question 2: What are the effects of these approaches on substantive educational outcomes?**

The second review question investigated the effectiveness of these translanguaging approaches on substantive educational outcomes. Table 4.5 summarises the effects of pedagogical translanguaging approaches by language or skill. The following sections present findings on the effects of pedagogical translanguaging on different aspects of language learning outcomes with summaries of individual studies.

Table 4.5 Summary of the effectiveness of pedagogical translanguaging

Assessed language/skill	Reference	Experimental group outcomes in mean ( <i>SD</i> ) (Hyphens separate scores from pre- and post-tests)	Control group outcomes in mean ( <i>SD</i> ) (Hyphens separate scores from pre- and post-tests)	Effect size	Quality of the study
Overall proficiency	Yuzlu & Dikilitas (2021)	<i>n</i> =60 Pre-intermediate experimental group ( <i>n</i> =30) pre- and post-test scores: 74.77 (6.9)-90.07 (5.34)	<i>n</i> =60 Pre-intermediate control group ( <i>n</i> =30) pre- and post-test scores: 76.20 (5.69)-84.63 (5.41)	$\eta^2 = 0.56$	2★
		Upper-intermediate experimental group ( <i>n</i> =30) pre- and post-test scores: 75.40 (4.21)-87.60 (5.31)	Upper-intermediate experimental group ( <i>n</i> =30) pre- and post-test scores: 75.87 (4.98)-84.87 (5.22)	$\eta^2 = 0.22$	
Overall proficiency	Tang & Peng (2019)	<i>n</i> =3 Overall English proficiency pre-post test scores: 37.17 (1.65)- 96.83 (0.94)	<i>n</i> =3 Overall English proficiency pre-post test scores: 36.67 (1.89)-85.83 (4.4)	$d = 3.46$	0
Vocabulary,	Hopp et al. (2021)	<i>n</i> =67	<i>n</i> =55		3★

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grammar, and metalinguistic awareness	English receptive vocabulary pre- post-delayed post test scores: 43.15 (6.41)-45.94 (5.75)-47.00 (6.64)	English receptive vocabulary pre- post-delayed post test scores: 40.38 (6.33)-44.89 (4.78)-45.98 (4.64)	$\eta_p^2=0.014$
	English productive vocabulary pre- post-delayed post test scores: 12.46 (3.17)-12.84 (3.11)-13.78 (3.13)	English productive vocabulary pre- post-delayed post test scores: 11.97 (2.74)-12.95 (2.59)-13.82 (2.87)	$\eta_p^2=0.012$
	English receptive grammar pre-post- delayed post tests: 44.10 (8.91)-49.31 (8.62)-51.82 (8.35)	English receptive grammar pre-post- delayed post tests: 41.84 (8.44)-46.93 (7.96)-48.63 (9.20)	$\eta_p^2=0.003$
	English phoneme manipulation pre- post-delayed post tests: 7.94 (3.37)- 9.98 (2.21)-10.08 (1.88)	English phoneme manipulation pre- post-delayed post tests: 7.32 (3.55)- 9.22 (2.78)-9.43 (2.44)	$\eta_p^2= 0.000$
	English rhyming task pre-post- delayed post tests: 7.05 (1.95)-7.48 (1.85)-7.88 (2.08)	English rhyming task pre-post- delayed post tests: 6.71 (1.91)-6.82 (2.06)-7.76 (1.96)	$\eta_p^2=0.009$
	Metalinguistic reflection posttest:	Metalinguistic reflection posttest:	$d= 0.027$

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		8.10 (2.90)	8.02 (3.10)	
Grammar	Hopp & Thoma (2021)	Study 1 <i>n</i> =62	Study 1 <i>n</i> =52	3★
		Questions (subject) pre-post tests mean accuracy scores in %: 87.1 (17.4)-88.7 (18.3)	Questions (subject) pre-post tests mean accuracy scores in %: 86.5 (20.9)-89.6 (17.0)	
		Questions (object) pre-post tests mean accuracy scores in %: 16.8 (22.4)-31.6 (34.1)	Questions (object) pre-post tests mean accuracy scores in %: 16.5 (19.7)-22.3 (30.1)	object <i>wh</i> - questions: experimental group: <i>d</i> = 0.466 control group: <i>d</i> = 0.134
		Relative clauses (subject) pre-post tests mean accuracy scores in %: 91.9 (15.1)-85.5 (20.2)	Relative clauses (subject) pre-post tests mean accuracy scores in %: 87.3 (20.6)-83.8 (23.8)	
		Relative clauses (object) pre-post tests mean accuracy scores in %: 26.8 (22.6)-26.5 (28.7)	Relative clauses (object) pre-post tests mean accuracy scores in %: 26.2 (25.8)-26.9 (31.4)	
		Study 2: <i>n</i> =69	Study 2: <i>n</i> =62	

	Declaratives (active) pre-post tests mean accuracy scores in %: 87.2 (21.9)- 86.0 (20.9)	Declaratives (active) pre-post tests mean accuracy scores in %: 80.3 (26.6)-82.8 (24.4)	
	Declaratives (passive) pre-post tests mean accuracy scores in %: 31.6 (30.4)- 43.9 (35.7)	Declaratives (passive) pre-post tests mean accuracy scores in %: 30.7 (29.1)-50.0 (31.6)	
	Questions (subject) pre- and post- tests mean accuracy scores in %: 86.9 (20.8)- 83.3 (21.3)	Questions (subject) pre-post tests mean accuracy scores in %: 77.9 (26.4)-79.3 (27.3)	
	Questions (object) pre-post tests mean accuracy scores in %: 28.1 (27.9)- 30.4 (31.0)	Questions (object) pre-post tests mean accuracy scores in %: 29.7 (26.3)-30.0 (31.6)	
Reading and Abdulaal (2020) writing	$n=33$ No pre-test score reported Post-test reading score mean: 7 (0.9437) Post-test writing score mean: 6.818 ( <i>SD</i> not reported)	$n=30$ No pre-test score reported Post-test reading score mean: 5.517 (1.228) Post-test writing score mean: 5.28 ( <i>SD</i> not reported)	Post-test reading score 1★ $d = 1.35$

Reading	Nur et al. (2020)	<i>n</i> =17 Reading comprehension pre- and post-test scores: 27.64 (12.51)-61.17 (11.25) Mean difference: 33.52	<i>n</i> =18 Reading comprehension pre- and post-test scores: 37.22 (9.58)-53.61 (9.36) Mean difference: 16.38	Effect size not reported 0
Reading	Qureshi & Aljanadbah (2021)	<i>n</i> =36 Overall reading score after the treatment: 14.21 (8.39) Mean score of main idea questions: 3.84 (1.77) Mean score of cloze reading questions: 4.39 (2.24) Mean score of vocabulary questions: 5.97 (4.81)	<i>n</i> =29 Overall reading score after the treatment: 13.83 (8.47) Mean score of main idea questions: 3.41 (1.91) Mean score of cloze reading questions: 4.41 (2.16) Mean score of vocabulary questions: 6.00 (4.55)	Overall reading score: <i>d</i> = 0.04 Main idea: <i>d</i> = 0.23 Cloze reading: <i>d</i> = 0.00 Vocabulary: <i>d</i> = 0.00 1★
Writing and speaking (business English)	Llanes & Cots (2020)	<i>n</i> =35 O = oral, W = written Overall score of salespitch marked by an expert examiner on pre- and post-tests: 13.91 (3.98)-14.86 (3.61)  Overall score of business letter	<i>n</i> =19 O = oral, W = written Overall score of salespitch marked by an expert examiner on pre- and post-tests: 10.58 (4.03)-11.31 (3.2)  Overall score of business letter	Effect sizes were not reported 2★

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marked by an expert examiner on pre- and post-tests: 11.31 (4.83)-12.09 (4.41)	marked by an expert examiner on pre- and post-tests: 9.05 (4.32)-9.53 (3.87)
OWPM (Words per Minute) pre- and post-test scores: 71.97 (19.73)-88.17 (23.18)	OWPM (Words per Minute) pre- and post-test scores: 67.68 (17.36)-79.58 (19.37)
OGUI (Guiraud's Index for Lexical Complexity) pre- and post-test scores: 4.68 (0.84)-5.32 (0.94)	OGUI (Guiraud's Index for Lexical Complexity) pre- and post-test scores: 4.79 (0.75)-5.18 (0.59)
OCL/TU (Clauses per T-Unit) pre- and post-test scores: 1.59 (0.56)-1.66 (0.61)	OCL/TU (Clauses per T-Unit) pre- and post-test scores: 1.30 (0.34)-1.49 (0.29)
OEFTU/TU (Error-free T-unit per T-Unit) pre- and post-test scores: 1.14 (0.57)-1.25 (0.64)	OEFTU/TU (Error-free T-unit per T-Unit) pre- and post-test scores: 1.20 (0.50)-1.18 (0.43)
OERR/TU (Errors per T-Unit) pre-	OERR/TU (Errors per T-Unit) pre-

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		and post-test scores: 0.23 (0.20)-0.25 (0.20)	and post-test scores: 0.15 (0.14)-0.24 (0.23)	
		WWDS/TU (Words per T-unit) pre- and post-test scores: 15.03 (1.13)-14.55 (4.05)	WWDS/TU (Words per T-unit) pre- and post-test scores: 12.71 (3.14)-14.68 (3.91)	
		WGUI pre- and post- test scores: 6.59 (1.16)-7.29 (0.78)	WGUI pre- and post- test scores: 6.79 (0.77)-6.91 (0.80)	
		WCL/TU pre- and post-test scores: 2.07 (0.46)-2.13 (0.49)	WCL/TU pre- and post-test scores: 1.98 (0.54)-2.29 (0.57)	
		WEFTU/TU pre- and post-test scores: 1.46 (0.60)-1.51 (0.77)	WEFTU/TU pre- and post-test scores: 1.74 (0.87)-1.79 (0.78)	
		WERR/TU pre- and post-test scores: 0.27 (0.18)-0.26 (0.20)	WERR/TU pre- and post-test scores: 0.23 (0.17)-0.21 (0.20)	
Writing	Turnbull (2019)	$n=60$ Class 1 ( $n=30$ , Department of Literature) academic writing (AW) and creative writing (CW) scores: English-only ( $n=5$ ): AW: 75.2 (7.72); CW: 74.5 (5.24)	Class 1: academic writing: $\eta_p^2 = 0.535$ , creative writing: $\eta_p^2 = 0.592$	1★

		<p>Weak translanguaging (<math>n=5</math>): AW: 81.6 (1.56); CW: 80.8 (4.62)</p> <p>Strong translanguaging (<math>n=5</math>): AW: 86.1 (1.88); CW: 86.9 (4.16)</p> <p>Class 2 (<math>n=30</math>, Department of Economics) academic writing (AW) and creative writing (CW) scores:</p> <p>English-only (<math>n=5</math>): AW: 78.9 (3.54); CW: 75.5 (7.51)</p> <p>Weak translanguaging (<math>n=5</math>): AW: 80.6 (1.52); CW: 81.0 (3.71)</p> <p>Strong translanguaging (<math>n=5</math>): AW: 87.6 (2.38); CW: 88.3 (4.62)</p>	<p>Class 2: academic writing: <math>\eta_p^2 = 0.520</math>, creative writing: <math>\eta_p^2 = 0.530</math></p>
Writing	Sano (2018)	<p><math>n=2</math></p> <p>PWD: prewriting discussion, J: Japanese, E: English, TL: translanguaging</p> <p>Type-token ratio (calculated by the reviewer) in the whole text:</p> <p>Participant 1: PWD-J (58.99%) &gt; PWD-TL (44.12%) &gt; PWD-E (41.35%) &gt; No PWD (40.97%)</p> <p>Participant 2: No PWD (49.69%) &gt; PWD-J (46.34%) &gt; PWD-TL (45.2%) &gt; PWD-E (39.33%)</p> <p>Type-token ratio (calculated by the reviewer) of content words in the whole text:</p> <p>Participant 1: PWD-J (68.13%) &gt; PWD-E (61.72%) &gt; PWD-TL (55.17%) &gt; No PWD (50.61%)</p> <p>Participant 2: No PWD (65.88%) &gt; PWD-TL (62.3%) &gt; PWD-J (57.5%) &gt; PWD-E (56.52%)</p>	<p>No statistical analysis was conducted 0</p>

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Content words in the sections related to PWD:

Participant 1: PWD-J (tokens 79.1%, types 88.7%) > PWD-E (tokens 36.7%, types 48.1%) > PWD-TL (tokens 59.3%, types 76.3%)

Participant 2: PWD-TL (tokens 62.3%, types 60.5%) > PWD-J (tokens 52.5%, types 67.4%) > PWD-E (tokens 46.1%, types 50.8%)

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#### 4.6.2.1 Overall proficiency

Two studies (Tang & Peng, 2019; Yuzlu & Dikilitas, 2021) tested the effects of pedagogical translanguaging on the development of overall proficiency. Pedagogical translanguaging was found potentially helpful for developing overall proficiency but it was unclear whether all skills would improve simultaneously.

Tang and Peng (2019) examined the effects of using translanguaging in phonics instruction on the overall development of English language proficiency among primary school students in China. The participants were six students from two classes. The intervention group was taught using English, Chinese, and visual or audio aids, while in the control group, the instruction was English-only. Data were students' scores in listening, reading, writing, speaking, and viewing (not specified) before and after the intervention. Results showed the intervention group scored statistically significantly higher than the control group. However, the sample size is small, increasing the possibility of a type one error. It is possible, therefore, that the significant difference occurred by chance. The researchers did not give details about the tests used to assess proficiency. The validity and reliability of the tests were not reported. Given these limitations, this study was rated 0 for trustworthiness.

Yuzlu and Dikilitas (2021) examined the effects of pedagogical translanguaging compared to Grammar Translation Method (focusing on analysing a language) and Communicative Language Teaching (focusing on using language). The participants were 60 pre-intermediate and 60 upper-intermediate students from four classes in Turkey. Each proficiency level had two classes, which were randomly assigned to either the experimental group (translanguaging) or the control group. The pre-intermediate control group was taught with the Grammar Translation Method, while the upper-intermediate control group was taught with the Communicative Language Teaching method. Results showed that in each proficiency level, the experimental group outperformed the control group statistically significantly in the overall scores of skill tests. However, it would have been beneficial if the study had reported the scores for each skill to see if translanguaging had the same effects on the development of all skills.

This study was rated 2\* for trustworthiness.

#### **4.6.2.2 Vocabulary, grammar, and metalinguistic awareness**

Two studies (Hopp & Thoma, 2021; Hopp et al., 2021) assessed the effects of pedagogical translanguaging on vocabulary, grammar, and metalinguistic awareness. Taken together, it was found that pedagogical translanguaging only led to a short-term advantage in learning a grammatical function that is different in English and German in terms of word order. Pedagogical translanguaging did not lead to advantages in other measures of vocabulary, grammar, and metalinguistic awareness. Both studies were rated 3\* for trustworthiness.

Hopp and Thoma (2021) conducted two intervention studies to investigate the effects of pedagogical translanguaging on the learning gains on English *wh*-questions and passives respectively. The participants were 258 primary school students in Germany. In the two studies, the teacher in the intervention group explained the target grammar in German, invited students to say the target sentences in their minority languages, and ask them to write down those target sentences in English and their minority languages. The teacher in the control group only used English in teaching and asked the students to practice using the grammar only in English. Outcomes were students' pre- and post-test scores on *wh*-questions (subject and object), active and passive sentences, and subject and object relative clauses. Results showed that the translanguaging group only scored statistically significantly higher in the acquisition of object *wh*-questions (e.g. Which animal does the horse bite?), while in other measures both the intervention and control groups made comparable gains.

Hopp et al. (2021) examined the effects of pedagogical translanguaging on English language learning outcomes of 122 primary school students from four schools in Germany. In each school, two classes participated. The two classes were randomly assigned as either the intervention group or the control group. Those in the intervention group spent 20% of the lesson time on translanguaging activities across 35 lessons for

six months, while those in the control group did the same activities but the activities were in English only. Data were the participants' English receptive and productive vocabulary, English receptive grammar, phonological awareness before, in the middle of, and after the intervention, and metalinguistic reflection results after the intervention. Although both intervention and control groups improved on all measures over time, no statistically significant differences were found between the two groups on any measure. There was also no statistically significant difference between students who spoke the majority language (German) and those who spoke the minority languages in these learning gains.

#### **4.6.2.3 Reading**

Three studies explored the effects of pedagogical translanguaging on English reading ability. Among them, two studies (Abdulaal, 2020; Nur et al., 2020) found positive effects of pedagogical translanguaging, while one study (Qureshi & Aljanadbah, 2021) did not find any significant difference between the translanguaging group and the English-only group. However, all the three studies were rated 1\* or below for trustworthiness. This means that the existing evidence is not robust enough to allow for confident causal conclusions. More carefully-designed research is needed before any conclusions can be drawn about whether translanguaging is beneficial for improving EFL reading.

Abdulaal (2020) designed an intervention study with L1 Arabic students where the experimental group read about the topic in Arabic but the control group did not in the reading and writing activities. Results showed that the experimental group did statistically significantly better than the control group in reading and writing post-tests. However, although there were pre-tests for reading and writing, the pre-test results were not reported. More importantly, it was said that the control group did not have Arabic support, but it was not reported whether the control group received background reading in English. The lack of details made it difficult to interpret the results of this study.

Nur et al. (2020) assessed the effects of the translanguaging strategy on L1 Indonesian students' English reading comprehension. The participants were 35 eighth-grade secondary school students, with 17 learners in the experimental group and 18 in the control group. Those in the experimental group adopted a translanguaging strategy, while the control group used a translation strategy. Outcomes were the participants' reading comprehension scores in the pre- and post-tests. Results showed that those in the experimental group made statistically significantly more gains in their scores. However, this study did not report details of the translanguaging approach. The delivery of the intervention was not clearly stated. Although data collection was said to be conducted from July to August 2018, the exact length of the intervention was not reported.

Qureshi and Aljanadbah (2021) investigated the effects of translanguaging pedagogy on Arabic university students' English reading comprehension. The participants were all male students majoring in business and IT. The texts for the reading task were different for the translanguaging and English-only groups. Regardless of the group they were in, all the participants read, summarised the paragraph, and discussed their summaries with their peers. The translanguaging group was provided with the Arabic translation of 14 key terms in the text and was allowed to use any languages in the tasks. Results showed no statistically significant differences between the two groups in the overall score or scores of any types of questions. However, there was no pre-test on reading comprehension. It was not reported whether the participants were randomly assigned into groups or if the groups had already existed. Therefore, it is hard to tell whether the two groups were different in English reading ability from the outset.

#### **4.6.2.4 Writing**

Four included studies focused on writing (Abdulaal, 2020; Llanes & Cots, 2020; Sano, 2018; Turnbull, 2019). The participants from the four studies were all university

students. Taken together, the results from these studies showed a potential benefit of pedagogical translanguaging in leading to written production with higher overall quality (for example, in terms of language, communicative achievement, content, and organisation), although few advantages were found in objective measures of written fluency, accuracy, and grammatical complexity.

As discussed in section 4.5.2.3, Abdulaal (2020) favoured the translanguaging group in writing post-test but the study was rated 1\* for trustworthiness.

Llanes and Cots (2020) examined the effects of pedagogical translanguaging on writing and speaking skills in business English. The participants were 54 university students in Spain. The students in the intervention group were allowed to use their L1s (Catalan and Spanish) and English in class, while those in the control group could only use English. The participants wrote a business letter and performed oral sales pitches in both pre- and post-tests. Results showed that the translanguaging group made statistically significantly more gains in the two subjective overall marks (one for business letter and the other for oral sales pitch) given by an expert examiner and one objective measure of written lexical complexity. The examiner gave the overall marks based on language, communicative achievement, content, and organisation. For the rest of the nine objective measures of fluency, accuracy, and grammatical complexity, both groups made comparable gains. This study showed that the students' written production from the translanguaging group may have been more effective in terms of real-life communication. This study was rated 2\* for trustworthiness.

Sano (2018) studied how four different conditions affected the written productions of two Japanese university students. The four conditions were no prewriting discussion, prewriting discussion in English, prewriting discussion in Japanese, and prewriting discussion using translanguaging. Results showed no advantages of using translanguaging in discussion in terms of the length of the essays and type/token ratios of content words, although some benefits of translanguaging were found in qualitative data, such as using L1 for clarification during discussion. The sample size of this study is trivial ( $n=2$ ) so it is unlikely to generalise the findings of this study to a wider

population of EFL students. This study was rated 0 for trustworthiness.

Turnbull (2019) also investigated prewriting discussion among Japanese university students. The participants were two classes of 30 students from different majors. All participants in Class 1 belonged to the Department of Literature, while the participants in Class 2 all belonged to the Department of Economics. In each class, students were randomly and evenly assigned to an academic or creative writing group. In each writing group, the 15 participants were assigned to three conditions (not reported if this was random): English-only, weak translanguaging group (Japanese for the discussion, English for the writing task), and strong translanguaging group (any languages for discussion). The students' essays were scored based on content, organization, vocabulary, language use, and mechanics. Results showed that the strong translanguaging group scored statistically significantly higher than the English-only group in both genres in both classes. The strong translanguaging group also outperformed statistically significantly the weak translanguaging group in class 2. In this study, it was a careful attempt to differentiate between genres and between weak and strong forms of translanguaging, but this also made the sample size in each group small ( $n=5$ ) when conducting statistical analysis. Nevertheless, this study showed potential benefits of the strong form of translanguaging in EFL writing for university students across different majors. This study was rated 1\* for trustworthiness.

#### **4.6.2.5 Speaking**

Only one study focused on speaking skills (Llanes & Cots, 2020). As described in section 4.5.2.4, this study found that in terms of speaking, the translanguaging group demonstrated an advantage only in the overall score given by the examiner. No statistically significant differences in any objective measures of the oral productions were found.

#### **4.6.2.6 Listening**

No included studies focused on the effects of pedagogical translanguaging on listening comprehension specifically, although listening skill was assessed as part of the overall proficiency tests in two studies (Tang & Peng, 2019; Yuzlu & Dikilitas, 2021). Therefore, there is a notable research gap in whether pedagogical translanguaging can be an effective pedagogy in teaching EFL listening.

#### 4.7 Certainty of evidence

Table 4.6 presents confidence in cumulative evidence of the effects of pedagogical translanguaging using the GRADE approach (Guyatt et al., 2011). Overall, the quality of evidence is low.

Table 4.6 Confidence in cumulative evidence using GRADE approach

Risk of bias	Inconsistency	Indirectness	Imprecision	Overall quality of evidence
Serious	Serious	Not serious	Serious	Low

##### 4.7.1 Risk of bias

The overall risk of bias of the included studies was considered serious because only four studies followed the design of randomised controlled trails; that is, randomly allocate individual participants into the intervention and control groups. More than half of the studies were either a cohort study or did not provide sufficient information about randomisation.

##### 4.7.2 Inconsistency

The inconsistency of the results was considered serious because of the

heterogeneity of the findings. While half of the included studies favoured the intervention group, the remaining half did not favour at least some measures of the intervention group. Among the studies favoured the intervention group, the effect sizes varied.

#### **4.7.3 Indirectness**

The indirectness was considered not serious because the majority of the studies made direct comparisons between the learning outcomes of learners taught with pedagogical translanguaging and those taught with the English-only or monolingual approach. The intervention and outcome measures were important to the participants.

#### **4.7.4 Imprecision**

The imprecision was considered serious. Although studies on vocabulary and grammar involved a relatively large number of participants, for other critical outcomes of language proficiency such as the four skills, the studies usually involved a small number of participants per group. Therefore, it is hard to estimate the precise effects of pedagogical translanguaging.

## Chapter Five Discussion

### 5.1 Summary of main findings

This systematic review examined the effects of pedagogical translanguaging in EFL classrooms. Guided by two review questions, 10 databases across relevant disciplines were searched. The selection process following the PRISMA guideline resulted in a total of 10 studies included in this systematic review.

The first review question sought to find out what approaches of translanguaging have been assessed for effectiveness in EFL classrooms in all age phases (e.g. primary, secondary, tertiary and in language schools). The included studies showed that the approaches involved learners' L1 in various kinds of activities, tasks, and interactions. However, most approaches were used to teach and assess EFL reading and writing, while the rest of the aspects of EFL learning were less well researched. Two major problems of assessment were identified. First, most studies only assessed the immediate effects of pedagogical translanguaging, while a delayed post-test was only used in one study. Immediate post-tests can show recency effects but cannot estimate the possible delayed influence of the intervention. Follow-up is important to detect any persistent effects of the intervention because it might take time for the learning outcomes of pedagogical translanguaging to occur. Because of the lack of follow-ups, the results of the synthesis of the included studies only reflected the effects of pedagogical translanguaging in a limited period. Second, there was a lack of the use of regionally, nationally, or internationally standardised tests to assess the students' learning outcomes. This may influence the reliability of the outcomes because the designers of the instruments, who were usually the researchers, were directly involved in the studies. The use of standardised tests is important as one way to prevent researchers to use instruments designed by them to prove or disprove a theory or claim (Gorard, 2015). Without a standardised test, it would also be difficult to compare the outcomes across studies or to compare the performance of participants to that of other students in the same region. Researchers also need to try to avoid the practice effect; that is, the

participants in the intervention group may practice the post-test. When the practice effect occurs, it means that the improvement in scores may not be the result of the intervention, but because the participants have practiced what is assessed in the post-test before they take it.

The second review question addressed the effects of these approaches on substantive educational outcomes. The results showed that no negative influences of pedagogical translanguaging were detected (that is, translanguaging approaches did not appear to be any less effective than monolingual approaches). However, there were not sufficient well-designed and well-conducted comparisons conducted in EFL contexts to support the claim that pedagogical translanguaging is beneficial. The included studies showed conflicting results about the effects of pedagogical translanguaging. Five out of the 10 included studies favoured the intervention group, but four of them were rated as low-quality studies. The rest of the five studies, which involved two high-quality studies, either did not find a statistically significant difference between the translanguaging and English-only groups in learning outcomes or favoured the translanguaging group only in a small number of measures. The current evidence shows only that pedagogical translanguaging may lead to immediate advantages in learning some English grammatical features and some aspects of English writing. The persistence of these effects was largely unexplored.

## **5.2 Strengths and limitations of the included studies**

The major strength of the included studies is that the individual and group differences among EFL learners were considered in the study design and data collection in some of the included studies. Hopp et al. (2021) and Hopp and Thoma (2021) investigated whether the effects of pedagogical translanguaging would be different for students who spoke the majority language and those who spoke minority languages as home languages. Turnbull (2019) considered the differences between university students from different departments. Yasar and Dikilitas (2021) involved participants at two different proficiency levels. These considerations are important in understanding

what factors may or may not affect the effects of pedagogical translanguaging. The results showed that in these four studies, these differences did not seem to have an influence.

However, it should be noted that the overall methodological quality of the included studies was poor with only two studies rated as high-quality. In these two studies, pedagogical translanguaging had only the immediate advantage of acquiring one grammatical function; that is, the English object *wh*-questions. The major limitations of the included studies were biases and the lack of follow-up. Only four out of the 10 studies randomly allocated the participating class(es) as the intervention group(s); four of the studies did not report how they allocated participants to different conditions. Most studies did not report whether the participants, teachers, and assessors were blinded to the intervention. Most studies did not have a longitudinal design or post-intervention follow-up. Only one study had a follow-up, which was three months after the intervention. More research that addresses these limitations is needed to understand the effects of pedagogical translanguaging.

### **5.3 Comparison with previous review findings**

This systematic review found the overall picture of the included studies had some different characteristics to studies on translanguaging more broadly. Prilutskaya's (2021) systematic review found that the majority of empirical studies on translanguaging were conducted in primary and secondary schools and that 15% of the studies were in pre-schools. However, the present systematic review, with a focus on EFL contexts and ELT classrooms, found that half of the included studies were conducted in universities and no study was conducted in pre-schools. Moreover, although Prilutskaya (2021) found that more than 100 included studies were from Africa, Asia, and Europe, the present systematic review was only able to include 10 studies that reported on substantive educational outcomes in EFL contexts for ELT purposes, which were all from these three regions. Such discrepancies mean that there was still not much empirical research on assessing the effects of pedagogical translanguaging that was especially focused on

EFL learners. Even though there were studies conducted in EFL contexts, they did not cover all educational levels and paid less attention to children.

As for assessment focus, this systematic review found the approaches were more frequently used to teach reading and writing. This is different from relevant previous reviews that found most of the included studies assessed vocabulary (Chalmers, 2019; Shin et al., 2020). One explanation is that the teachers and researchers found it easier to incorporate pedagogical translanguaging in reading and writing compared to other teaching aims. In the included studies, common activities in reading or writing lessons included organising peer discussion on essay planning or the main ideas of a reading passage. It is recommended that researchers continue to explore the effects of pedagogical translanguaging on reading and writing, but also address other skills as well.

As for the overall effects of pedagogical translanguaging, this systematic review did not find enough robust evidence of the positive effects of pedagogical translanguaging on English language proficiency. This echoed the findings of a relevant systematic review by Chalmers (2019), which found limited trustworthy evidence that L1-mediated pedagogies had substantive educational outcomes for primary and pre-primary L2 learners. However, unlike Chalmers (2019), who suggested a promising role of L1 in teaching L2 vocabulary for young L2 learners, the only study that assessed vocabulary knowledge in the present systematic review did not find pedagogical translanguaging advantageous despite also focussing on primary school students.

As for other learning outcomes, the present systematic review was relevant to Shin et al.'s (2020) review that found mostly positive outcomes in favour of using L1 for L2 writing task completion. However, the present systematic review found that such a positive role was limited. In the included studies, pedagogical translanguaging for writing led to higher scores given by examiners but not in any objective measures of lexical or grammatical choices. This means that pedagogical translanguaging might be more effective in teaching EFL learners to convey their ideas with better communicative achievement, content, and organisation but did not have statistically

significant effects on the language they use. In other words, the vocabulary and grammatical features in their written production were still at the same level of complexity and diversity as that of their peers taught with an English-only approach. Although more research is needed to confirm this assumption, such a finding implies that the positive learning outcomes of pedagogical translanguaging may be limited to only some ways of measurement.

#### **5.4 The findings and the translanguaging literature**

The results of the first review question showed that the intervention of the included studies followed the translanguaging theory closely about utilising all linguistic and multimodal resources to help language learning. As Li and Lin (2019) pointed out, translanguaging as pedagogy should not only integrate the use of different languages but also enable all students to actively participate in the co-construction of knowledge. In the included studies, all interventions were described as allowing the teachers and students to use their L1 in class. Some of the approaches could demonstrate knowledge co-making. For example, students learned from each other during peer discussion using translanguaging. Another example is when students who spoke minority languages were invited to say the target sentence in their L1 to the whole class.

However, some interventions may be difficult to be justified since some ambiguity existed about the term translanguaging. Most notably, how to define strong and weak forms of pedagogical translanguaging and how they could have similar and different implications for research and practices. While researchers generally agree that the strong form of translanguaging allows bilinguals to use all linguistic features, the notion of the weak form of translanguaging remains unclear. García and Lin (2017) proposed that the weak version of translanguaging acknowledges the state language boundaries but calls for softening the boundaries. However, how this idea can be integrated into language teaching has been ambiguous. One included study, Turnbull (2019), used the weak form of translanguaging to describe the practice of using one language first and then another for a task, as Williams (1996) described. However, a more recent

theoretical paper by Cenoz and Gorter (2022) referred to the weak form of pedagogical translanguaging as the inclusion of all languages in the curriculum but not in the class. It means teachers of different languages teach similar content in each language class but in each class, teachers are only allowed to use the target language. The confusion surrounding translanguaging needs to be explicitly addressed. For example, why both strong and weak forms of translanguaging are necessary theoretically and pedagogically. This is important for clearer and consistent intervention designs in future studies.

The results of the second review question showed that in EFL contexts, there was not much reliable evidence that pedagogical translanguaging had substantive benefits in building up English language proficiency. Such a finding may seem to contradict many studies (Barahona, 2020; Fang & Liu, 2020; Liu & Fang, 2020) that reported teachers' and students' observed or perceived beneficial functions of translanguaging for ELT. However, it should be noted that many suggestions on incorporating translanguaging into ELT have usually been built on qualitative data through questionnaires, interviews, and classroom observations on other benefits and roles of translanguaging, not on the statistical evidence that pedagogical translanguaging can improve English language proficiency. It was not the purpose of this systematic review to assess the effects of translanguaging on outcomes such as building multilingual identity and relieving anxiety. However, the actual or potential benefits of language proficiency are an important factor to consider in any discussion of the effects of pedagogical translanguaging. Indeed, strong claims have been made about these effects (see Duarte (2020), for example), but many claims are not well supported by empirical evidence.

This review focused on EFL settings only, but the discussion of the extent to which translanguaging is helpful in general is not new. According to Hickey et al. (2014), Williams (2000, 2002) claimed that translanguaging would be most beneficial to those who have developed reasonable proficiency rather than to beginner learners of the L2; Williams (2000, 2002) believed translanguaging was to retain bilingual proficiency instead of teaching L2 at early stages. Although 20 years have passed since Williams

proposed such an assumption, neither Williams' claim nor the claims that translanguaging needs to be adopted in EFL contexts (Rabbidge, 2019; Sembiente & Tian, 2020) have been sufficiently supported by robust evidence on the improvement of English language proficiency.

Taken together the results of the two review questions, this present systematic review found (1) consistencies and inconsistencies between translanguaging theory and the actual pedagogical translanguaging approaches and (2) the lack of evidence on the effects of pedagogical translanguaging on English language proficiency. Overall, further work on translanguaging is needed, but as Cummins (2021) suggested, the legitimacy of theoretical constructs and claims of translanguaging can be problematic if the claims are inconsistent with relevant empirical evidence, internally contradictory, and do not help promote effective pedagogy and policies.

## **5.5 Summary of the chapter**

This chapter has discussed the findings in light of previous views and translanguaging literature as well as the strengths and limitations of the included studies. This chapter has highlighted that most included studies that assessed the effects of pedagogical translanguaging were not designed properly so it would be difficult to make any firm conclusion about its effects on English language proficiency. The current evidence found in this systematic review cannot support the claim that pedagogical translanguaging is beneficial.

## Chapter Six Conclusion

### 6.1 Strengths and limitations of the review process

There are some strengths and limitations of the review process. As for the appropriateness of the inclusion and exclusion criteria and search strategy, one strength is that this review did not exclude studies because of their publication type, publication language, and educational levels in the search of evidence. The search strategy was also developed to search databases in different disciplines. However, one limitation is that the search was limited to databases that could be searched using terms written in English. As a result, some relevant studies that were written in and could only be searched through languages other than English may have been excluded. The search would have been more comprehensive if databases in other languages had been searched.

As for the selection process, one strength is that this review involved a second reviewer to help screen the samples of title and abstracts as well as the full texts. After that, any disagreements on the inclusion and exclusion decisions were discussed. Moreover, the quality of included studies was assessed and the quality was considered in the interpretation of the findings. However, data extraction and quality assessment of the included studies were not cross-checked by a second reviewer due to time constraints.

Another strength is that the review focused on the literature on translanguaging so that it included only studies that described the interventions as translanguaging. Therefore, the audience that would be most interested in this systematic review would be those who would like to know about pedagogical translanguaging in particular. However, in other words, this means that studies that used other terms to describe the use of L1 in ELT classrooms were excluded, such as “a multilingual approach to diversity” (Busse et al., 2020), “cross-linguistic instruction” (Lucas & Yiakoumetti, 2019), and “codeswitched reading” (Ong & Zhang, 2018). This may be one reason why, as discussed in section 5.2, the findings of this systematic review have some

inconsistencies with previous reviews on the use of L1 in L2 teaching and learning.

## **6.2 Implications**

This systematic review found a variety of approaches to pedagogical translanguaging. They all challenged traditional monolingual English-only approaches to ELT. These findings can help EFL teachers revisit their attitudes towards the use of learners' languages in the classroom, reflect on their teaching, and get inspiration in terms of the way of leveraging students' L1 as a resource. Teachers and students can have autonomy in terms of when and how to adopt pedagogical translanguaging depending on the learning aims.

Translanguaging in EFL contexts is an emerging research area. It is recommended that teachers and policymakers continue to pay attention to the evidence of the effects of pedagogical translanguaging. Teachers can try to adjust their teaching if pedagogical translanguaging is suitable for their lessons when taking into consideration other factors as well. These factors may include teacher and student attitudes, the teacher's teaching style, the purpose of the lesson, and school policies. This systematic review found some potential benefits of pedagogical translanguaging in teaching English grammar and writing. These two teaching goals can be the starting point if teachers would like to implement pedagogical translanguaging.

However, teachers are advised not to overestimate the benefits of pedagogical translanguaging on English language proficiency. Due to the lack of trustworthy evidence, it was difficult to conclude any effects of pedagogical translanguaging on English language proficiency in EFL contexts. No evidence was detected that those taught with pedagogical translanguaging and those taught with English-only would differ significantly in English language proficiency in the long term as a result of such difference in teaching. It is also questionable whether and to what extent can the existing evidence be generalised to the wider population of EFL learners that did not participate in the included studies. Teachers should also be aware that at some educational levels and in some regions, there may have been no available evidence at

all in terms of the effects of pedagogical translanguaging on English language proficiency.

Researchers and teacher educators should help teachers interpret current studies on pedagogical translanguaging and provide professional support if teachers have doubts and confusion about adapting new teaching approaches.

### **6.3 Recommendations for future research**

More research efforts need to be put into investigating the effects of pedagogical translanguaging on language proficiency. This is important not only for teachers' decisions on how to deliver a lesson but also for policies about language teaching more generally. When designing studies in the future, researchers are recommended to address the methodological issues identified in this systematic review. Most importantly, researchers need to randomly allocate participants to the intervention or control groups, make sure the participants are comparable from the outset and deliver delayed post-tests after the intervention. A clearer reporting of the intervention is needed such as listing the steps of conducting the intervention.

Future studies can explore the effects of pedagogical translanguaging used for all kinds of teaching aims, especially on vocabulary, EFL listening, and speaking, which have been under-researched. Moreover, research that targets learners from a variety of cultural and linguistic backgrounds is recommended as the current evidence only comes from eight countries. While studies conducted with participants across all age groups are recommended, the evidence on pre-school, primary, and secondary school learners would be especially helpful.

More work is needed on assessment methods and assessment literacy in pedagogical translanguaging. Many existing studies have described the implementation of pedagogical translanguaging, but there is much less discussion on when and how should the effects of pedagogical translanguaging be assessed. Without appropriate assessments, it would be difficult to estimate the effects of pedagogical translanguaging in the short term and long term.

A critical next step is to, based on trustworthy evidence of the effects of pedagogical translanguaging, develop a theoretical framework on how pedagogical translanguaging may have different effects. This is to bridge the gap between the translanguaging theory and practice that would be useful to serve as the guide for researchers and teachers to understand and implement pedagogical translanguaging.

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## **Appendices**

Appendix A. IDESR protocol

### **IDESR ID**

IDESR000022

### **Revision notes**

After piloting the screening procedure, it was agreed that the first question was not focused enough. It has therefore been modified slightly. To be consistent with this change, inclusion criterion No.9 was revised to include studies that report data on both teacher's implementation and the substantive effects of translanguaging on English language proficiency.

Inclusion criterion No.10 was added to provide clarity in terms of what interventions will be included.

### **Title**

Teachers' implementation of translanguaging in EFL classrooms: a protocol for a systematic review

### **Review Question**

- (1) What approaches of translanguaging have been assessed for effectiveness in EFL classrooms in all age phases (e.g. primary, secondary, tertiary and in language schools)?
- (2) What are the effects of these approaches on substantive educational outcomes?

### **Rationale**

The use of translanguaging in the classroom aims to utilise the learners' linguistic resources for better learning outcomes. Current research has suggested that translanguaging has the potential to scaffold the learners in understanding instructions,

completing in-class activities, and comprehending the linguistic and content knowledge, among other pedagogical benefits.

Translanguaging refers to the discursive practices that bilingual or multilingual speakers use to understand the world (García, 2009). It has origins in language education in Wales to describe the alternation between Welsh and English. Translanguaging as a pedagogical strategy highlights the use of all linguistic and semiotic resources available to the learners. It challenges the monolingual approach in educational settings where the students are usually bilinguals or multilinguals. However, most research on translanguaging has focused on mainstream classrooms and only limited research has been done with the focus on its use in foreign language teaching classrooms. It is still unclear the extent to which the use of L1 will have an impact on language learning outcomes (Macaro, 2021).

Although the majority of research on translanguaging in the classroom involves the teaching of English or using English to teach other subjects, the scoping searches show that no systematic review has been done to summarise how translanguaging is used in EFL classrooms, specifically, and the effects of the use of translanguaging in EFL classrooms. This systematic review aims to fill this research gap.

García, O. (2009). *Bilingual Education in the 21st Century: A Global Perspective*. Wiley Blackwell.

Macaro, E. (2021). The L2-only versus the multilingual debate. In E. Macaro & R. Woore (Eds.), *Debates in Second Language Education* (pp. 201-221). Routledge.

## **Inclusion Criteria**

### 1. Reference

Include studies with complete reference

Exclude studies without complete reference

### 2. Time

Include studies published between 2009 and 2021

Exclude studies published before 2009

Rationale: The term “Translanguaging” was introduced to the literature by García in 2009.

### 3. Publication status

No studies will be excluded because of their publication status

Rationale: include all studies, both published and grey literature, to avoid publication bias

### 4. Language

No studies will be excluded because of the language in which they are written  
Advanced language learners or translators will be consulted when the papers are in languages other than English and Chinese.

Rationale: to synthesize studies from a variety of contexts as much as possible

### 5. Study types

Include research articles or book chapters that report on empirical data

Exclude articles, chapters, or books that do not report on empirical data (for example, commentary, conceptual or theoretical papers).

### 6. Educational level

No studies will be excluded because of the education levels

Rationale: to provide an overview of translanguaging in EFL classrooms across all education levels

### 7. Research contexts

Include studies in which the English language is the subject of teaching (including EFL, EAP, ESP lessons) in settings where English is not the language of the majority or one of the formal languages of the country

Exclude studies where English is the medium of instruction for curriculum learning (such as CLIL, EMI, bilingual schools) and where English is the language of the majority or one of the formal languages of the country (i.e. ESL)

### 8. Participants

Include studies where the population is largely or exclusively typically developing language learners of any age

Exclude studies where the population is exclusively learners with special educational needs or developmental language disorders

#### 9. Outcomes

Include studies that report data on both teacher's implementation and the substantive effects of translanguaging on English language proficiency.

Exclude studies that do not report data on both teachers' implementation and the substantive effects of translanguaging on English language proficiency. For example, studies that only report student or teacher perceptions of the effectiveness of translanguaging.

#### 10. Intervention

Include studies that describe the intervention as 'translanguaging'

Exclude studies that do not describe the intervention as translanguaging (e.g. code-switching, cross-linguistic comparison, etc.)

### **Information Sources**

The list of databases searched in this systematic review was informed by various sources. These were research networks that publish systematic reviews such as The Campbell Collaboration and International Database of Education Systematic Reviews (IDESR). Moreover, a research librarian in the Education Library at the University of Oxford was consulted to help the researcher refine the list of databases and to develop the search strategy. The following bibliographic databases will be accessed and searched electronically through the Search Oxford Libraries Online (SOLO) tool provided by the University of Oxford:

Education:

- British Education Index
- Education Resources Information Center (ERIC)
- Education Abstracts

Linguistics:

- Linguistic Collection at ProQuest
- MLA International Bibliography

Psychology:

- PsycINFO

Multidiscipline:

- SCOPUS
- Web of Science Social Sciences Citation Index (SSCI)
- ProQuest Dissertations and Theses
- Google Scholar When searching Google Scholar, the researcher will go through every page of the search results until a page shows no relevant studies.

### **Search Strategy**

Boolean operators “AND” and “OR” will be used to combine search terms. The year of publication will be limited to 2009 to 2021. When searching free-text words, wildcard characters will be used. The asterisk (\*) will enable the searching of a word with different spelling. The text term “translanguag\*” is hoped to identify both translanguage and translanguaging.

Three types of search terms are included: the ones about the pedagogical practice, the ones about the context and participants, and those about learning outcomes.

The following search terms are identified to search the bibliographic databases: translanguag\* AND (ELT OR “English language teach\*” OR “English as a foreign language” OR EFL OR TESOL OR EAP OR ESP OR “teaching English to speakers of other languages” OR “English for academic purposes” OR “English for specific purposes”) AND (effect\* OR outcome\* OR score\* OR benefit\* OR development\* OR result\*)

In addition, citation chaining, both backward and forward searching, will also be applied as complementary searching. Backward searching will involve reading through the reference list of each report that meets all of the inclusion criteria to see if there are

any relevant studies that have not been included. Forward searching is to go through the list of studies that have cited that particular paper to find out any related articles, if available on the journal website.

### **Data Management**

The databases will be searched using the key search terms. The titles, abstracts, years of publication, authors, and keywords of all the studies displayed in the results will be exported as a RIS file to Rayyan, a tool for viewing, selecting, and managing data in systematic reviews. Rayyan will help de-duplicate references and categorize abstracts based on inclusion and exclusion decisions. A Microsoft Excel file will be kept to record inclusion and exclusion decisions. The record-keeping table will include (1) reference, (2) decision at the title and abstract screening stage, (3) whether full-paper was obtained, and (4) decision at the full-text screening stage, and the reason, if any, for exclusion.

After obtaining the full papers of all potentially eligible studies, the researcher will use Mendeley, a reference management software, to read through the texts and note down reasons for inclusion and exclusion of each paper. Mendeley will also be used in generating in-text citations and bibliography in the dissertation.

After the full-paper screening, all the included papers will be re-analysed in Mendeley for coding to answer the research questions. All the codes will be recorded in a Microsoft Excel file. Then, the researcher will read through all the codes to develop analytical codes.

In addition, the researcher will keep a research activity journal on Microsoft Word on a weekly basis for an up-to-date record of data management.

### **Selection Process**

After exporting results to Rayyan, the researcher will identify and remove any duplicate records. Then, the researcher will apply inclusion and exclusion criteria to screen the title and abstract of each study. The researcher will highlight the keywords

and record the reason for inclusion or exclusion decisions for each study. Only the studies that cannot be excluded on the basis of the information contained in the abstract will be kept, while studies that fail to meet any one of all the inclusion criteria will be excluded. The full reports of all studies that cannot be excluded on the basis of the information contained in the abstract will be sought.

After the screening of titles and abstracts, the researcher will obtain the full papers of all potentially eligible studies. These full papers will be screened according to the inclusion and exclusion criteria. The reasons for excluding any papers will be recorded.

Moreover, to reduce researcher bias, a peer reviewer who majors in the field of education or applied linguistics will be invited to screen 10% of the titles and abstracts from the main search. A 90% agreement will be sought to ensure the inclusion and exclusion criteria have been successfully applied. If the agreement is less than 90%, the researcher and the peer reviewer discuss the reasons with each other. After that, another 10% of the sample will be screened again until a 90% agreement is reached. If time is sufficient after the researcher assesses all the full papers obtained, the peer reviewer will be invited to repeat the above process for the full papers to confirm the inclusion of the full-text citations is consistent with the inclusion and exclusion criteria.

A PRISMA flow diagram (Moher et al., 2009) will be used to present the process of inclusion.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Prisma Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS medicine*, 6(7), e1000097.

### **Data Collection Process**

First, the researcher will identify the data that need to be extracted, develop a data extraction table in Microsoft Excel spreadsheets, and pilot it with five included studies. The data extraction table will be revised and finalised after piloting. Then, the

researcher will read through all the included studies, extract data, and record the data in the data extraction table in Microsoft Excel spreadsheets.

Based on the data extraction table, the researcher will develop and complete data tables to report data in the systematic review.

### **Data Items**

Two types of data will be extracted: descriptive data and analytical data.

The descriptive data will include the study's authors, year of publication (if it is a published study), when and where the study was conducted, study focus, number of participants (including any dropouts), the participants' age, sex, ethnicity and languages, interventions and comparators (if any), source of funding, setting.

The analytical data include the descriptions of the translanguaging approach(es) and the learning outcomes. The outcomes will be quantitative measurements of student English language proficiency.

### **Risk of bias/trustworthiness of individual studies**

As the first research question addresses how translanguaging is implemented in EFL classrooms and the data will be mainly the descriptions of the implementations, so the risk of bias is not relevant. Therefore, the assessment of the risk of bias will be applied only to intervention studies that report outcome data on English language proficiency. Gorard's Sieve (Gorard, 2015) will be used as the assessment tool to evaluate the design, scale, dropout, outcomes, fidelity, and validity of these studies. This tool has been widely used in educational research for examining the risk of bias of individual studies.

After the assessment, the results and conclusions of the systematic review will be developed with consideration of the quality of these studies.

Gorard, S. (2015). A proposal for judging the trustworthiness of research findings. *researchED magazine*.

## **Data Synthesis**

Narrative synthesis will be used to synthesize data for the first research question. It refers to a method that mainly uses words and texts to summarise and explain the results of a systematic review (Popay et al., 2006). Following the guidance by Popay et al. (2006), the narrative synthesis process will go through the four elements: developing a theory of how the intervention works, why and for whom, (2) developing a preliminary synthesis of findings of included studies, (3) exploring relationships in the data, and (4) assessing the robustness of the synthesis. Thematic analysis will be used as one technique for developing preliminary synthesis.

If there are studies that have a similar research design and have student outcome measures, meta-analysis will be conducted to synthesize numerical data for the third research question. The effect sizes will be computed by calculating the Cohen's d. Otherwise the second research question will be addressed using narrative synthesis.

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., ... & Duffy, S. (2006). Guidance on the conduct of narrative synthesis in systematic reviews. *A product from the ESRC methods programme Version, 1(1), b92.*

## **Meta-biases**

### **Confidence in cumulative evidence**

The confidence in cumulative evidence will be assessed using GRADE approach (<https://www.gradeworkinggroup.org/>).

### **Sources of Funding**

None

### **Role of Funders**

None

### **Anticipated or actual start date:**

2022-02-28

**Anticipated completion date:**

2022-09-30

**Other language resources**

**Current Status**

Ongoing

**Details of Published Review**

**IDESR URL**

<https://idesr.org/article/IDESR000022>

Appendix B. Data extraction template

<b>The study</b>	Author(s) (year of publication)	
<b>Date form completed</b>	dd/mm/yy	
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference		Write down the full reference in APA citation format
Source		The database in which the study was found
Language		The language in which the publication is written
Publication type		Article/book/book chapter/thesis/conference proceeding/report
Source of funding		The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out		The year and school term when the study collected the data
The place where was the study carried out		The country/region/school where the study collected the data
Research topics		For example, the language skills under investigation
Research questions		The general and specific research questions
<i>Participants (Students)</i>		
Number of students involved		The total number and the number for each group (if the students are divided into different groups)
Age and sex of the students		
Ethnicity		
Languages		The languages that the students speak

Attrition		The number of students that quit the study halfway (if any)
Other demographic information		For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
Number of teachers involved		The total number and the number for each group (if the teachers are divided into different groups)
Age and sex of the teachers		
Ethnicity		
Languages		The languages that the teacher speak
Shared languages between the teacher and the students		
Attrition		The number of teachers that quit the study halfway (if any)
Other demographic information		Other backgrounds related to teaching
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)		
Data collected		The The number of lesson observations, interviews, etc.
Were the research instruments trialled or validated in some way?		
Length of the intervention		
Is it compared to other pedagogical practices?		If yes, specify the other pedagogical practices
Are there variables involved? (Where appropriate) what are the dependent and independent variable(s)?		Write down the variables and how the variables were measured
What other variables are 'controlled for'? (confounding variables?)		Write down the controlled variables and how they were controlled

Was the sample divided into groups or did the groups already exist?		Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?		
What treatment did each group get?		Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?		
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson		General English lessons, vocabulary/grammar/listening/reading/writing/speaking lessons, EAP, or ESP
Detailed examples given		The detailed examples reported such as the dialogue between the teacher and students
Resources to help the implementation of translanguaging		Bilingual books/handouts/dictionaries, etc.
Who used the approach?		Teacher only/students only/both teacher and students
When was the approach used?		Teacher's explanation/student's group work/student's individual work
What interaction was the approach used for?		Teacher-whole class/Teacher-several students/Teacher-an individual student/Student-student
How was the approach used?		Languages/gestures/emoji
How frequently was the approach used?		Frequency during the intervention
<i>Learning outcomes</i>		
Language/skills assessed		
Language proficiency before and after the intervention		(mean, standard deviation, etc.)
Are we told how were the data		

analysed?		
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)		
Are there implications? For teaching and learning?		
Do the implications match the study findings?		
Are there suggestions for further research?		
<b>Notes for data synthesis</b>		
Overall interpretation and comments		

Appendix C. Data extraction tables and risk of bias assessment for individual studies

<b>The study</b>	(1) Abdulaal (2020)	
<b>Date form completed</b>	15/06/2022	
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Abdulaal, M. A. A. D. (2020). A Shift from a Monoglossic to a Heteroglossic View: Metalinguistic Stego-Translanguaging Lens Approach. <i>Arab World English Journal</i> , 11(4), 461-473. <a href="https://dx.doi.org/10.24093/awej/vol11no4.29">https://dx.doi.org/10.24093/awej/vol11no4.29</a>	Write down the full reference in APA citation format
Source	EBSCO	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Deanship of Scientific Research provided by Prince SattamBin Abdulaziz University in the Kingdom of Saudi Arabia	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	Not reported	The year and school term when the study collected the data
The place where was the study carried out	Port Said University in Egypt	The country/region/school where the study collected the data
Research topics	The effects of stego-translanguaging (indirect use of mother tongue) on IELTS reading and writing scores	For example, the language skills under investigation

Research questions	<p>1. Which approach is more influential in teaching IELTS reading: stego-translanguaging or monoglossic?</p> <p>2. Are there any significant differences between the scores of IELTS writing posttest in the experimental group and in the control group?</p>	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	63	The total number and the number for each group (if the students are divided into different groups)
Age and sex of the students	39 female, 24 male Aged from 19 to 24	
Ethnicity	Arabic	
Languages	Arabic	The languages that the students speak
Attrition	None	The number of students that quit the study halfway (if any)
Other demographic information	The participants were randomly selected from 75 EFL learners	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
The researcher conducted the intervention. All relevant information about the researcher/teacher was not reported.		
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Quasi-experimental intervention study with a pretest-posttest design	
Data collected	Reading and writing pre-tests (scores not reported); Reading and writing post-tests	The number of lesson observations, interviews, etc.

	(Reading: three texts, 40 questions, 60 minutes; writing: two descriptive tasks, 60 minutes)	
Were the research instruments trialled or validated in some way?	Yes. The participants took the pre-test again three days later in order to calculate a co-efficient correlation ( $r = 0.734$ ).  The participants took the post-test again eight days later in order to calculate a co-efficient correlation ( $r = 0.675$ ).	
Length of the intervention	Four successive weeks (three classes per week)	
Is it compared to other pedagogical practices?	Yes. In the control group, there was no L1 support. Learners were taught through the target language English only.	
Are there variables involved?  (Where appropriate) what are the dependent and independent variable(s)?	Dependent variables: reading scores, writing scores  Independent variable: group (experimental vs. control)	Write down the variables and how the variables were measured
What other variables are 'controlled for'?  (confounding variables?)	Not reported	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	Not reported	Write down how the sample was divided into groups
(Where relevant) did the groups know they were	Not reported	

being divided up like this and for this purpose?		
What treatment did each group get?	In the reading and writing activities, the translanguaging group read about the topic in Arabic first but the control group did not have Arabic support	Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?	Not reported	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	Reading and writing	General English lessons, vocabulary/grammar/listening/reading/writing/speaking lessons, EAP, or ESP
Detailed examples given	“the participants were asked to read first in Arabic about some of the topics involved in the reading and writing activities before starting to answer them”	The detailed examples reported such as the dialogue between the teacher and students
Resources	Arabic background reading	Bilingual books/handouts/dictionaries, etc.
Who used the approach?	The teacher (researcher)	Teacher only/students only/both teacher and students
When was the approach used?	At the beginning of the reading and writing activities	Teacher’s explanation/student’s group work/student’s individual work
What interaction was the approach used for?	There was no direct interaction between teacher and students	Teacher-whole class/Teacher-several students/Teacher-an individual student/Student-student

How was the approach used?	The use of L1 in providing background reading	Languages/gestures/emoji
How frequently was the approach used?	Three classes per week for four weeks	Frequency during the intervention
<i>Learning outcomes</i>		
Language/skills assessed	Reading, writing	
Language proficiency outcomes before and after the intervention	No pre-test score reported 1. Post-test reading score: Intervention group: 7 (0.9437) Control group: 5.517 (1.228) 2. Post-test writing score: Intervention group: 6.818 ( <i>SD</i> not reported) Control group: 5.28 ( <i>SD</i> not reported)	
Are we told how were the data analysed?	Yes, using independent samples <i>t</i> tests	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	Not discussed in the article Limitations identified by the reviewer: unclear reporting (length of the passages and the time devoted to the intervention in each lesson); not reported if the conditions were randomly assigned	
Are there implications? For teaching and learning?	The study claimed that stego-translanguaging is a better approach than the monoglossic approach	
Do the implications match the study findings?	No	
Are there suggestions for	Not discussed in the article	

further research?	Suggestions from the reviewer: similar study but the condition of the control group could be that the participants were provided background reading in English	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	This study differentiated between stego-translanguaging (indirect use of mother tongue) and translanguaging. This study found that stego-translanguaging group outperformed the control group in the post-tests on reading and writing. However, the pre-test scores were not reported. It was unclear how long were the Arabic background reading passages and, in each lesson, how much time was devoted to it.	

**Reference:** Abdulaal (2020)

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
2★: Matched comparison	2★: Small number of cases per compariso n group	4★: Minimal attrition, no evidence of impact on findings	1★: Outcome with issues of validity or appropriate- ness	1★: Outcome with issues of validity or appropriate- ness	1★: Strong indication of experiment er effect, diffusion or other threat	1★

<b>The study:</b> (2) Hopp et al. (2021)		
<b>Date form completed:</b> 28/06/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Hopp, H., Kieseier, T., Jakisch, J., Sturm, S., & Thoma, D. (2021). Do minority-language and majority-language students benefit from pedagogical translanguaging in early foreign language development?. <i>Multilingua</i> , 40(6), 815-837. <a href="https://doi.org/10.1515/multi-2020-0164">https://doi.org/10.1515/multi-2020-0164</a>	The full reference in APA citation format
Source	EBSCO	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Funded by the Bundesministerium für Bildung und Forschung	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	The academic year 2018/2019	The year and school term when the study collected the data
The place where was	One of four state schools in Northern Germany	The country/region

the study carried out		/school where the study collected the data
Research topics	The effects of pedagogical translanguaging on FL development (vocabulary, grammar, phonological awareness), metalinguistic awareness	For example, the language skills under investigation
Research questions	There are four research questions in total: 1. Does pedagogical translanguaging affect the development of general FL skills in vocabulary and grammar? 2. Does pedagogical translanguaging boost the development of phonological awareness? 3. Does pedagogical translanguaging affect students' ability to reflect on language contrasts and similarities? 4. Do majority-language students differ from minority-language students?	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	128, with 122 participants completed all testing sessions	
Age and sex of the students	Gender not reported Mean age: nine years and seven months Grade: fourth	
Ethnicity	Not reported	
Languages	A variety of languages (not specified)	
Attrition	6	
Other information	The students started foreign language learning in 3 <sup>rd</sup> grade	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
Number of teachers	2 teachers, who were also researchers of this paper. They	

	taught both experimental and control groups	
Ethnicity	Not reported	
Languages	English only	
Shared languages with students	English only	
Attrition	None	
Other information	Not reported	Other backgrounds related to teaching
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Quasi-experimental mixed-methods study with a pretest-posttest-delayed posttest design	
Data collected	See the variable section below	
Were the research instruments trialled or validated in some way?	Not reported but some of the instruments were adapted from previous studies	
Length of the intervention	23 weeks	
Comparison to other pedagogical practices	It was compared to the monolingual approach. In the control group, there were no multilingual elements. Learners were taught with the target language English only.	
Are there variables involved? (Where appropriate) what are the dependent and	Dependent variables: receptive vocabulary in English, measured by British Picture and Vocabulary Scale (BPVS3; Dunn et al. 2009); receptive grammar development, measured by the Test for	Write down the variables and how the variables were measured

<p>independent variable(s)?</p>	<p>Reception of Grammar (TROG-2; Bishop 2003); productive vocabulary skills in English, German, and the respective minority languages of the students, measured by the productive part of the Crosslinguistic Lexical Task (CLT; Rinker and Gagarina 2014)</p> <p>phonological awareness, measured by a phoneme manipulation task (following Weber et al. 2007) and an odd-one-out rhyming task developed by the researchers of this study</p> <p>The above data were collected in pre-, post- (immediately after the intervention), and delayed-post tests (three months after the intervention).</p> <p>Metalinguistic awareness was collected through interviews at post-test, which involved tasks of explaining cross-linguistic differences. The participants' answers were rated by two trained research assistants from 0-3</p> <p>Independent variables: group (translanguaging vs. control) and language status (majority language vs. minority language)</p>	
<p>What other variables are 'controlled for'? (confounding variables?)</p>	<p>General cognitive abilities, measured by part 1 of the non-verbal IQtest "Grundintelligenztest Skala 2–Revision"(CFT 20-R; Weiß 2006);</p> <p>working memory, measured by a forward digit span task (adapted from HAWIK-IV; Petermann and Petermann 2008);</p> <p>SES, years of education, net household income and cultural capital (number of books), collected through questionnaire</p> <p>These controlled measures were collected in pre-test</p>	<p>Write down the controlled variables and how they were controlled</p>

Was the sample divided into groups or did the groups already exist?	Two intact classes were randomly designated as the intervention group or the control group	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?	The participants were aware of the project but it was not specified to what extent they were aware of the difference between the two groups	
What treatment did each group get?	In the intervention group, 20% of the lesson time was devoted to pedagogical translinguaging activities, while the control group was taught with the target language English only with the same activities	Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?	Not specified whether the participants in one group knew they were different from the other group	
<b>Analytical data</b>		
<i>the translinguaging approach</i>		
Type of the lesson	General English lessons (the lesson aim of each lesson was not specified)	General English lessons, vocabulary/grammar/listening/reading/writing/speaking lessons, EAP, or ESP
Detailed examples given	Example 1: when teaching contrastive grammar, illustrate similarities and differences between English and other languages Example 2: when teaching vocabulary, introducing	The detailed examples reported such as the dialogue between the teacher and

	<p>cognates between English and other languages</p> <p>Example 3: rhymes and chants as well as activities on the substitution of word-initial sounds in English</p> <p>Note: these other languages include students' minority languages and foreign languages taught in secondary schools</p>	students
Resources	Textbook <i>Playway 4</i> (Gerngross et al., 2013).	Bilingual books/handouts/dictionaries, etc.
Who used the approach?	The teachers (researchers)	
When was the approach used?	Not clearly reported but there were 36 activities	
What interaction was the approach used for?	Not reported but it was likely that it involved all kinds of interaction as there were many activities	
How was the approach used?	The examples given compared English with other languages	Languages/gestures/emoji
How frequently was the approach used?	20% of the lesson time through 36 activities in 4 textbook units across 35 lessons. Each lesson was 45 minutes.	
<i>Learning outcomes</i>		
Language/skills assessed	<ol style="list-style-type: none"> <li>1. Receptive vocabulary in English</li> <li>2. Productive vocabulary in English, German, and minority languages</li> <li>3. Receptive grammar development</li> <li>4. Phonological awareness</li> <li>5. Metalinguistic awareness</li> </ol>	

<p>Language proficiency outcomes before and after the intervention</p>	<p>1. English receptive vocabulary pre-post-delayed post-tests:  Intervention group: 43.15 (6.41)-45.94 (5.75)-47.00 (6.64)  Control group: 40.38 (6.33)-44.89 (4.78)-45.98 (4.64)</p> <p>2. English productive vocabulary pre-post-delayed post-tests:  Intervention group: 12.46 (3.17)-12.84 (3.11)-13.78 (3.13)  Control group: 11.97 (2.74)-12.95 (2.59)-13.82 (2.87)</p> <p>3. English receptive grammar pre-post-delayed post-tests:  Intervention group: 44.10 (8.91)-49.31 (8.62)-51.82 (8.35)  Control group: 41.84 (8.44)-46.93 (7.96)-48.63 (9.20)</p> <p>4. English phoneme manipulation pre-post-delayed post-tests:  Intervention group: 7.94 (3.37)-9.98 (2.21)-10.08 (1.88)  Control group: 7.32 (3.55)-9.22 (2.78)-9.43 (2.44)</p> <p>5. English rhyming task pre-post-delayed post-tests:  Intervention group: 7.05 (1.95)-7.48 (1.85)-7.88 (2.08)  Control group: 6.71 (1.91)-6.82 (2.06)-7.76 (1.96)</p> <p>6. Metalinguistic reflection posttest:  Intervention group: 8.10 (2.90)  Control group: 8.02 (3.10)</p>	<p>(mean, standard deviation, etc.)</p>
<p>Are we told how were the data analysed?</p>	<p>Yes. Independent samples <i>t</i>-tests were used in pre-test to make sure the intervention and control groups were comparable. Repeated-measures ANOVAs were used to compare English language development (vocabulary, grammar, phonological awareness) at the three testing sessions (pre-test, post-test, delayed post-test). Independent-sample <i>t</i>-tests were used to compare metalinguistic reflection ability.</p>	

<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	The intervention may not be long enough for a longitudinal study. Ideally, a longitudinal study may last for more than one year	
Are there implications? For teaching and learning?	<ol style="list-style-type: none"> <li>1. The 20% of lesson time for translanguaging activities may have been too few or too diverse to have direct intervention effects</li> <li>2. The potential benefits of translanguaging may have been overstated</li> <li>3. Students who spoke majority and minority languages made similar progress over time</li> </ol>	
Do the implications match the study findings?	Yes	
Are there suggestions for further research?	More similar research with a longer time of intervention should be done	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	<p>Overall, this is a well-designed study. However, there are not many details of the implementation of translanguaging, which may be that the intervention lasted for a long time (23 weeks) and the purpose of this study is to give an overall result rather than how individual lessons were taught. In this study, translanguaging did not have significant effects on vocabulary, grammar, phonological awareness, and metalinguistic awareness. This is the same for both majority and minority language speakers. The reason may be that the effects of pedagogical translanguaging were not as evident as other factors that could lead to L2 success, such as input.</p>	

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**Reference:** Hopp et al. (2021)

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<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
4★: Fair design for comparison	3★: Medium number of cases per comparison n group	3★: Some initial imbalance or attrition	4★: Standardised pre-specified independent outcome	3★: Clear intervention, unintended variation in delivery	3★: Little evidence of diffusion or other threat	3★

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<b>The study:</b> (3) Hopp & Thoma (2021)		
<b>Date form completed:</b> 24/06/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Hopp, H., & Thoma, D. (2021). Effects of Plurilingual Teaching on Grammatical Development in Early Foreign-Language Learning. <i>The Modern Language Journal</i> , 105(2), 464-483. <a href="https://doi.org/10.1111/modl.12709">https://doi.org/10.1111/modl.12709</a>	The full reference in APA citation format
Source	EBSCO	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Funded by the German Federal Ministry for Education and Research (BMBF)	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	The academic years 2018–2019 (Cohort 1) and 2019–2020 (Cohort 2)	The year and school term when the study collected the data
The place where was the study carried	Four different German public primary schools	The country/region/school

out		where the study collected the data
Research topics	The effects of pedagogical translanguaging (PTL) on FL grammatical development	For example, the language skills under investigation
Research questions	<p>There are three research questions in total:</p> <ol style="list-style-type: none"> <li>1. Does PTL by virtue of the use of contrastive language activities promote the acquisition of foreign-language gram-mar?</li> <li>2. Do effects of PTL extend across different grammatical phenomena?</li> <li>3. Are there differences in the degrees to which PTL affects the grammatical development of majority language and minority language learners?</li> </ol>	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	258 students from eight intact classes in total (in each school, two intact classes participated)	
Age and sex of the students	<p>Gender not reported</p> <p>Age: 9-10 years old</p> <p>Grade: fourth</p>	
Ethnicity	Not reported	
Languages	<p>At least 35% of students from each class spoke minority languages in addition to the majority language (German). These minority languages were 15 languages: Albanian, Arabic, Chinese, Croatian, Farsi, Greek, Indonesian, Italian, Kurdish, Polish, Romanian, Russian, Spanish, Turkish, and Vietnamese.</p>	
Attrition	4	
Other information	The students started foreign language learning in 3 <sup>rd</sup> grade	For example,

		socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
Number of teachers	4 teachers. At each school, one teacher taught both experimental and control groups. The teachers were qualified English teachers. At the same time, regular English teachers were present during the English lessons and supervised the teaching.	
Ethnicity	Not stated	
Languages	English only	
Shared languages with students	English only	
Attrition	None	
Other information	None	Other backgrounds related to teaching
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Quasi-experimental quantitative study with a pretest-posttest design	
Data collected	Participant responses on pre and post tests developed by the researchers. Each student received a booklet with the pictures for all items. For each display, the teacher first named all animals from left to right and then read the experimental sentence twice at a slow pace. Then students circled the answers. The procedure was the same for the two experiments.	
Were the research	Not reported	

instruments trialled or validated in some way?		
Length of the intervention	two 45-minute lessons	
Comparison to other pedagogical practices	It was compared to the monolingual approach. In the control group, there were no multilingual elements. Learners were taught with the target language English only. The control group completed longer or additional activities from the textbook or engaged in similar activities	
Are there variables involved? (Where appropriate) what are the dependent and independent variable(s)?	<p>Study 1:</p> <p>Dependent variables: Participants' performance on subject questions, object questions, subject relative clauses, and object relative clauses</p> <p>Independent variables: group (translanguaging vs. control) and language status (majority language vs. minority language)</p> <p>Study 2:</p> <p>Dependent variables: Participants' performance on active declarative sentences, passive declarative sentences, subject questions, and object questions</p> <p>Independent variables: group (translanguaging vs. control) and language status (majority language vs. minority language)</p>	Write down the variables and how the variables were measured
What other variables are 'controlled	Cognitive processing, measured by a nonverbal IQ test (CFT20-R; Weiß, 2006);	Write down the controlled

<p>for’? (confounding variables?)</p>	<p>Working memory, measured by a forward digit span task (adapted from HAWIK-IV; Petermann &amp; Petermann, 2008);</p> <p>German language proficiency, measured by a standardized 32-item picture naming task (Cross-Linguistic Lexical Task, CLT; Rinker &amp; Gagarina, 2014);</p> <p>English receptive vocabulary knowledge, measured by a receptive vocabulary task (British Picture and Vocabulary Scale, BPVS3; Dunn, Dunn, &amp; Styles, 2009);</p> <p>English receptive grammar knowledge, measured by a receptive grammar task (Test for Reception of Grammar, TROG2; Bishop, 2003).</p>	<p>variables and how they were controlled</p>
<p>Was the sample divided into groups or did the groups already exist?</p>	<p>Two intact classes were randomly designated as the intervention group or the control group</p>	<p>Write down how the sample was divided into groups</p>
<p>(Where relevant) did the groups know they were being divided up like this and for this purpose?</p>	<p>The participants were aware of the project but it was not specified to what extent they were aware of the difference between the two groups. Consent was obtained.</p>	
<p>What treatment did each group get?</p>	<p>The two 45-minute lessons were part of the longer intervention that lasted for six months.</p> <p>In lesson 1, both groups got the same treatment. The teacher showed the picture cards to exemplify grammar and students practiced both types of <i>wh</i>-questions (study 1) and actives and passives (study 2) in comprehension</p>	<p>Specify the pedagogies and length of the treatment</p>

	<p>(picture identification) and production tasks.</p> <p>In lesson 2, the two groups got slightly different treatments.</p> <p>They both first followed the same procedure in lesson 1. Then, in the intervention group, the teacher wrote down the subject and object questions (study 1) and active and passive sentences (study2) on the blackboard in English, but illustrated questions (study 1) and passives (study 2) in German. She also asked the students who were minority language speakers to give examples of these questions (study 1) and the sentences (study 2). Toward the end of the lesson, students filled in a worksheet by writing down questions (study 1) and active and passive sentences (study 2) in English, German, and other languages. By contrast, in the control group, the teacher only wrote down English questions (study 1) and active and passive sentences (study 2) on the blackboard, and the students practiced the use of English questions (study 1) and English sentences (study 2) further. They completed the same worksheet by filling in several subject and object questions in English.</p>	
Were the groups aware of the treatment?	Not specified whether the participants in one group knew they were different from the other group	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	Grammar	
Detailed examples given	<p>Examples of the six-month longer project:</p> <p>Example 1: using multilingual songs in teaching</p> <p>Example 2: using words from different languages in</p>	The detailed examples reported such as the dialogue

	<p>vocabulary exercises</p> <p>Example 3: comparing English vocabulary or spelling with the majority language, German, and the minority languages</p> <p>Examples of the two 45-minute lessons in this study were given in the format of the procedure of teaching. See “How was the approach used?” section below.</p>	between the teacher and students
Resources	Textbook <i>Playway 4</i> (Gerngross et al., 2013).	
Who used the approach?	The teachers (researchers)	
When was the approach used?	When exemplifying the grammar	
What interaction was the approach used for?	Teacher to all students; students to the whole class; students work on the exercise independently	
How was the approach used?	<p>Only in the intervention group.</p> <p>(1) illustrate questions and sentences in German;</p> <p>(2) ask the students who were minority language speakers to give examples of the target questions and sentences.</p> <p>(3) Students write down questions and sentences in English, German, and other languages</p>	Languages/gestures/emoji
How frequently was the approach used?	Used in one of the two lessons	
<i>Learning outcomes</i>		
Language/skills assessed	Students’ ability to make <i>wh</i> -questions (subject and object), relative clauses (subject and object), declaratives (active and passive)	
Language proficiency outcomes before	<p>1. Questions(subject) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 87.1 (17.4)-88.7 (18.3)</p>	(mean, standard deviation)

<p>and after the intervention</p>	<p>Control group: 86.5 (20.9)-89.6 (17.0)</p> <p>2. Questions(object) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 16.8 (22.4)-31.6 (34.1)</p> <p>Control group: 16.5 (19.7)-22.3 (30.1)</p> <p>3. Relative clauses (subject) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 91.9 (15.1)-85.5 (20.2)</p> <p>Control group: 87.3 (20.6)-83.8 (23.8)</p> <p>4. Relative clauses (object) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 26.8 (22.6)-26.5 (28.7)</p> <p>Control group: 26.2 (25.8)-26.9 (31.4)</p> <p>Study 2:</p> <p>1. Declaratives (active) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 87.2 (21.9)- 86.0 (20.9)</p> <p>Control group: 80.3 (26.6)-82.8 (24.4)</p> <p>2. Declaratives (passive) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 31.6 (30.4)- 43.9 (35.7)</p> <p>Control group: 30.7 (29.1)-50.0 (31.6)</p> <p>3. Questions(subject) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 86.9 (20.8)- 83.3 (21.3)</p> <p>Control group: 77.9 (26.4)-79.3 (27.3)</p> <p>4. Questions(object) pre-post tests mean accuracy scores in %:</p> <p>Intervention group: 28.1 (27.9)- 30.4 (31.0)</p>	<p>n, etc.)</p>
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	Control group: 29.7 (26.3)-30.0 (31.6)	
Are we told how were the data analysed?	Yes. All data were analysed using mixed logistic regression modelling	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	<p>First, no productive knowledge of grammar was assessed.</p> <p>Second, the two lessons were embedded in a longer intervention so it is unknown whether the effects of translanguaging can only surface on such occasions.</p> <p>Third, the researchers indicated that grammar was usually not a focus of teaching in primary schools so the generalisability of the findings is questionable.</p>	
Are there implications? For teaching and learning?	<p>First, translanguaging can lead to an advantage in learning gains when used to teach language contrasts between English and German.</p> <p>Second, translanguaging is not harmful in terms of learning grammatical functions that are similar between English and German.</p> <p>Third, majority and minority language students can make comparable gains when they are taught with the translanguaging approach.</p>	
Do the implications match the study findings?	Yes	
Are there suggestions for further research?	Future studies can control for the type and number of minority language students.	
<b>Notes for data synthesis</b>		
Overall interpretation	In this study, there were two experiments. Study 1 showed that translanguaging	

and comments	<p>had significant positive effects on the students' accuracy of object questions. Within the intervention group, majority and minority language students made comparable gains. Study 2 showed no significant positive effects of translanguaging on any measure. The intervention and control groups made comparable gains. The reason might be that in study 1, the target grammar was very different between English and German, while in study 2, the target grammar was similar in English and German.</p>
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**Reference:** Hopp & Thoma (2021)

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<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
4★: Fair design for comparison	3★: Medium number of cases per comparison group	3★: Some initial imbalance or attrition	4★: Standardised pre-specified independent outcome	4★: Clear intervention, uniform delivery	3★: Little evidence of diffusion or other threat	3★

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<b>The study:</b> (4) Llanes & Cots (2020)		
<b>Date form completed:</b> 30/06/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Llanes, À., & Cots, J. M. (2020). Measuring the impact of translanguaging in TESOL: A plurilingual approach to ESP. <i>International Journal of Multilingualism</i> , 1-16. <a href="https://doi.org/10.1080/14790718.2020.1753749">https://doi.org/10.1080/14790718.2020.1753749</a>	The full reference in APA citation format
Source	Web of Science	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Supported by Ministerio de Economía y Competitividad	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	The Spring semester of the academic year 2017-2018	The year and school term when the study collected the data
The place where was the study carried out	A small university in Catalonia	The country/region/school

		where the study collected the data
Research topics	The effects of translanguaging on EFL oral and written development	For example, the language skills under investigation
Research questions	Does the systematic introduction of activities involving translanguaging practices have a significant effect on English as a Foreign Language (EFL) learning in terms of oral and written language development? If so, how does it compare to a traditional monolingual approach?	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	54 students from two intact Business English classes	
Age and sex of the students	Balanced gender (27 females, 27 males) Mean age: 19.72 Grade: first year in university	
Ethnicity	Not reported	
Languages	50 out of the 54 participants were Catalan/Spanish bilinguals	
Attrition	None	
Other information	Participants were all in their first year of the Business Administration and Management degree. Initial proficiency level of A2 or B1 at the outset of the study (A1 = 1, A2 = 26, B1 = 20, B2 = 7)	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
Number of teachers	2 different teachers taught the intervention and control groups respectively	
Ethnicity	Not reported	
Languages	Not specified but it can be inferred from the article that	

	both teachers could speak Catalan, Spanish, and English	
Shared languages with students	Not specified but it can be inferred from the article that both teachers could speak Catalan, Spanish, and English. That is, they shared all the learners' languages.	
Attrition	None	
Other information	They both held a BA in Translation and a PhD in Applied Linguistics	Other backgrounds related to teaching
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Quasi-experimental mixed-methods study with a pretest-posttest design	
Data collected	Oxford Quick Placement Test (OPT) as pre-test; Students' production on a written business letter and an oral sales pitch in both pre- and post-tests; A questionnaire to collect beliefs and feelings about their English classes in pre- and post-tests	
Were the research instruments trialled or validated in some way?	Inter-rater reliability and intra-rater reliability were high for the two subjective measures	
Length of the intervention	16 weeks (3.5h per week)	
Comparison to other pedagogical practices	The students in the control group were discouraged from using languages other than English.	
Are there variables involved? (Where appropriate) what are the dependent and independent	Dependent variables: 12 measures in total. Six measures for salespitch and the other six for business letters. Each of the six measures contained one subjective measure and five objective measures. Independent variables: time (pre vs. post tests), group	Write down the variables and how the variables were measured

variable(s)?	(intervention vs. control)	
What other variables are 'controlled for'? (confounding variables?)	Not reported	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	The participants came from two intact Business English classes	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?	The participants only knew they were taking part in a research project and they signed a consent form. However, they were not informed about the focus of the research.	
What treatment did each group get?	In the intervention group, the teacher used a translanguaging approach for teaching and encouraged the students to use all languages for learning in all tasks.  In the control group, the teacher used English only and allowed students to use English only.	Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?	Not specified but it can be inferred from the article that they were not aware of the treatment because they did not know the focus of the study	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	ESP (business English)	
Detailed examples given	Example 1:  When teaching how to write a business letter in English, the students in the translanguaging group were asked first to reflect on how they would write it in their L1	The detailed examples reported such as the dialogue between the

	<p>and, after examining the parts of a business letter in their L1, they were asked to write it in English.</p> <p>Example 2: The teaching materials of the intervention group included specific activities where the students were asked to resort to translation</p> <p>Example 3: Ask the students to reflect on similar text / communicative situations in the students' L1</p>	teacher and students
Resources	Special teaching materials designed for the study	
Who used the approach?	Both the teacher and the students	
When was the approach used?	Teacher's explanation and students' individual work	
What interaction was the approach used for?	Teacher to students and students to students (pair or group work)	
How was the approach used?	Using different languages to facilitate learning	Languages/gestures/emoji
How frequently was the approach used?	The approach was used during the whole intervention period. The course took up 3.5 h per week, which was distributed into two days.	
<i>Learning outcomes</i>		
Language/skills assessed	Writing (writing a business letter) Speaking (sales pitch)	
Language proficiency outcomes before and after the intervention	<p><math>n=35</math></p> <p>O = oral, W = written</p> <p>The overall score was marked according to the 4 scales (language, communicative achievement, content, and organisation) with a 1–5 point range each, leading to a maximum possible score of 20 points.</p>	(mean, standard deviation, etc.)

	<p>1. Overall score of salespitch marked by an expert examiner: Intervention group: 13.91 (3.98)-14.86 (3.61) Control group: 10.58 (4.03)-11.31 (3.2)</p> <p>2. Overall score of business letter marked by an expert examiner: Intervention group: 11.31 (4.83)-12.09 (4.41) Control group: 9.05 (4.32)-9.53 (3.87)</p> <p>3. OWPM (Words per Minute) pre- and post- test scores: Intervention group: 71.97 (19.73)-88.17 (23.18) Control group: 67.68 (17.36)-79.58 (19.37)</p> <p>4. OGUI (Guiraud's Index for Lexical Complexity) pre- and post- test scores: Intervention group: 4.68 (0.84)-5.32 (0.94) Control group: 4.79 (0.75)-5.18 (0.59)</p> <p>5. OCL/TU (Clauses per T-Unit) pre- and post- test scores: Intervention group: 1.59 (0.56)-1.66 (0.61) Control group: 1.30 (0.34)-1.49 (0.29)</p> <p>6. OEFTU/TU (Error-free T-unit per T-Unit) pre- and post- test scores: Intervention group: 1.14 (0.57)-1.25 (0.64) Control group: 1.20 (0.50)-1.18 (0.43)</p> <p>7. OERR/TU (Errors per T-Unit) pre- and post- test scores: Intervention group: 0.23 (0.20)-0.25 (0.20) Control group: 0.15 (0.14)-0.24 (0.23)</p> <p>8. WWDS/TU (Words per T-unit) pre- and post- test</p>	
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	<p>scores:</p> <p>Intervention group: 15.03 (1.13)-14.55 (4.05)</p> <p>Control group: 12.71 (3.14)-14.68 (3.91)</p> <p>9. WGUI pre- and post- test scores:</p> <p>Intervention group: 6.59 (1.16)-7.29 (0.78)</p> <p>Control group: 6.79 (0.77)-6.91 (0.80)</p> <p>10. WCL/TU pre- and post- test scores:</p> <p>Intervention group: 2.07 (0.46)-2.13 (0.49)</p> <p>Control group: 1.98 (0.54)-2.29 (0.57)</p> <p>11. WEFTU/TU pre- and post- test scores:</p> <p>Intervention group: 1.46 (0.60)-1.51 (0.77)</p> <p>Control group: 1.74 (0.87)-1.79 (0.78)</p> <p>12. WERR/TU pre- and post- test scores:</p> <p>Intervention group: 0.27 (0.18)-0.26 (0.20)</p> <p>Control group: 0.23 (0.17)-0.21 (0.20)</p>	
Are we told how were the data analysed?	Yes. All data were analysed using linear mixed-effects models	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	There was only one expert examiner to give the overall marks	
Are there implications? For teaching and learning?	Although there were few significant differences between the two groups, all of these differences favoured translanguaging. It shows there are potential benefits of translanguaging for teaching business English to university students.	
Do the implications match the study findings?	Yes	

Are there suggestions for further research?	Future research can involve a larger sample size of participants, more than one examiner, and more measures regarding general communicative capacities	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	In this study, only the results of the three measures out of the 12 measures showed positive effects of translanguaging. For the rest of the measures, the two groups made comparable gains. The three measures included two overall marks assigned by an expert examiner. The rubrics for giving the two overall marks included 4 scales (language, communicative achievement, content, and organisation). Although one limitation of this study is that only one expert examiner was involved to give overall marks for the two tasks, it is possible that the student productions from the translanguaging group were more effective in terms of real-life communication.	

**Reference:** Llanes & Cots (2020)

Design	Scale	Dropout	Outcomes	Fidelity	Validity	Overall rating
2★: Matched comparison	2★: Small number of cases per comparison group	4★: Minimal attrition, no evidence of impact on findings	3★: Pre-specified outcome, not standardized or independent	3★: Clear intervention, uniform delivery	2★: Evidence of experiment effect, diffusion or other threat	2★

<b>The study:</b> (5) Nur et al. (2020)		
<b>Date form completed:</b> 02/07/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Nur, R., Namrullah, Z., Syawal, S., & Nasrullah, A. (2020) Enhancing Reading Comprehension through Translanguaging Strategy. <i>Journal of Language Teaching and Research</i> , 11(6), 970-977. <a href="http://dx.doi.org/10.17507/jltr.1106.14">http://dx.doi.org/10.17507/jltr.1106.14</a>	The full reference in APA citation format
Source	ProQuest	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Not reported	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	the academic year 2017-2018	The year and school term when the study collected the data
The place where was the study carried out	a school of rural areas, known as SMP Negeri 4 Maiwa, in Enrekang district Indonesia	The country/region/school where the

		study collected the data
Research topics	The effects of translanguaging on EFL reading comprehension	For example, the language skills under investigation
Research questions	Can the implementation of translanguaging strategy enhance reading comprehension of eighth-grade students of SMP Negeri 4 Maiwa, Indonesia?	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	35 from two intact classes	
Age and sex of the students	Mean age not reported Grade: 8 <sup>th</sup>	
Ethnicity	Not reported	
Languages	L1 Indonesian	
Attrition	None	
Other information	A pre-experiment observation found that the students used their mother tongue in English class	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
The researcher conducted the intervention. All relevant information about the researcher/teacher was not reported.		
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Quasi-experimental quantitative study with a pretest-posttest design	
Data collected	Reading comprehension tests	
Were the research instruments trialled or validated in some way?	The post-test was conducted twice after giving treatment for both classes to determine the validity of the test	

Length of the intervention	Not specified (data were collected from July to August so two months at most)	
Comparison to other pedagogical practices	Translation strategy	
Are there variables involved? (Where appropriate) what are the dependent and independent variable(s)?	Dependent variables: reading comprehension scores Independent variables: group (intervention vs. control)	Write down the variables and how the variables were measured
What other variables are 'controlled for'? (confounding variables?)	Not reported	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	The two classes were randomly assigned as experimental and control groups	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?	Not reported	
What treatment did each group get?	The intervention group was taught using the translanguaging approach and the control group was taught using the translation strategy. However, not enough details were given about the intervention	Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?	Not reported	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	Reading	
Detailed examples given	There was some information in the Discussion	The detailed

	section. However, it was more about how the students engaged in the lesson rather than how the translanguaging approach was implemented	examples reported such as the dialogue between the teacher and students
Resources	Not reported	
Who used the approach?	Not reported	
When was the approach used?	Not reported	
What interaction was the approach used for?	Not reported	
How was the approach used?	Not reported	Languages/gestures/emoji
How frequently was the approach used?	Not reported	
<i>Learning outcomes</i>		
Language/skills assessed	Reading. Questions were about the main idea, figures, topic sentence, historical events, and the text's moral message to answer the questions	
Language proficiency outcomes before and after the intervention	$n=35$ Overall score of reading comprehension: Intervention group: 27.64 (12.51)-61.17 (11.25) Mean difference: 33.52 Control group: 37.22 (9.58)-53.61 (9.36) Mean difference: 16.38	(mean, standard deviation, etc.)
Are we told how were the data analysed?	Yes. The data were analysed using independent samples $t$ tests	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g.	The intervention and the procedure of the experiment were not clearly reported	

confounding variables)		
Are there implications? For teaching and learning?	The researchers of this study concluded that the use of a translanguaging strategy could enhance students' reading comprehension	
Do the implications match the study findings?	Because of poor reporting, it is hard to determine the trustworthiness of this study	
Are there suggestions for further research?	It is hard to replicate this study because of the lack of details. More similar research on reading comprehension is needed.	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	Although this study reported a significant difference in the gains in reading comprehension scores in favour of the translanguaging group, it is still hard to determine to what extent the translanguaging approach is beneficial. The study has not specified the length of the intervention, how the intervention was carried out, and how the scores were calculated. Overall, it is unlikely that this study could contribute to the understanding of the effects of translanguaging approach.	

**Reference:** Nur et al. (2020)

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
3★: Balanced comparison	2★: Small number of cases per compariso n group	4★: Minimal attrition, no evidence of impact on findings	1★: Outcome with issues of validity or appropriate- ness	0: No clearly defined intervention	1★: Strong indication of experiment er effect, diffusion or other threat	0

<b>The study:</b> (6) Qureshi & Aljanadbah (2021)		
<b>Date form completed:</b> 04/07/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Qureshi, M. A., & Aljanadbah, A. (2021). Translanguaging and reading comprehension in a second language. <i>International Multilingual Research Journal</i> , 1-11. <a href="https://doi.org/10.1080/19313152.2021.2009158">https://doi.org/10.1080/19313152.2021.2009158</a>	The full reference in APA citation format
Source	Scopus	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Not reported	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	Not reported	The year and school term when the study collected the data
The place where was the study carried out	A university in the United Arab Emirates	The country/region/school where the study collected the data
Research topics	The effects of translanguaging on EFL reading comprehension	For example, the language skills under investigation
Research questions	(1) Are there significant differences in reading	The general and

	<p>outcomes in the translanguaging pedagogy group vs. the control group?</p> <p>(2) Are there significant group differences for each question type (i.e., the main idea, cloze reading, &amp; vocabulary)?</p>	specific research questions
<i>Participants (Students)</i>		
Number of students	65	
Age and sex of the students	<p>Mean age not reported</p> <p>Grade: 2<sup>nd</sup> to 4<sup>th</sup> year in university</p> <p>All participants were male</p>	
Ethnicity	Not reported	
Languages	L1 Arabic	
Attrition	None	
Other information	The students all majored in Business and IT	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
The researcher conducted the intervention. All relevant information about the researcher/teacher was not reported.		
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	A quantitative study with one reading comprehension test only	
Data collected	Reading comprehension test scores	
Were the research instruments trialled or validated in some way?	The comprehension task obtained a Cronbach reliability coefficient of .98.	
Length of the intervention	A single class session	

Comparison to other pedagogical practices	It was compared to an English-only approach	
Are there variables involved? (Where appropriate) what are the dependent and independent variable(s)?	Dependent variables: reading comprehension scores Independent variables: group (intervention vs. control)	Write down the variables and how the variables were measured
What other variables are 'controlled for'? (confounding variables?)	The participants' proficiency in English and Arabic languages were considered comparable according to course projects in both languages and English scores at admission	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	Not reported	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?	Not reported	
What treatment did each group get?	The intervention and control groups received different versions of the reading comprehension task. For the intervention group, the Arabic meanings of 14 key terms in the text were provided. They wrote summaries and discussed their summaries with peers using any languages they wanted. In the third set of questions, Arabic translations were provided for the vocabulary. For the control group, the text was all in English. They	Specify the pedagogies and length of the treatment

	wrote summaries and discussed with peers only in English	
Were the groups aware of the treatment?	Not reported	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	Reading	
Detailed examples given	The procedure of the intervention was given	The detailed examples reported such as the dialogue between the teacher and students
Resources	Two different versions of the reading passage: Jonathan Kozol's (1991) " <i>Savage inequalities: Children in America's Schools</i> "	
Who used the approach?	Students only	
When was the approach used?	During reading (glossary), after reading (peer discussion), during the test (Arabic translation was provided in the intervention group)	
What interaction was the approach used for?	Discussion among students	
How was the approach used?	(a) receiving Arabic glosses (i.e., only meaning) for key terms in the text, (b) employing their first language for summarizing four paragraphs from the passage, (c) using their first language in discussion for comparing summaries with peers, and (d) consulting the Arabic meanings (provided) while attempting the vocabulary items.	Languages/gestures /emoji
How frequently was the approach used?	In only a single session	
<i>Learning outcomes</i>		

Language/skills assessed	Reading. Questions were about the main idea, cloze reading, and vocabulary	
Language proficiency outcomes before and after the intervention	<p><math>n=35</math></p> <p>1. Overall reading score after the treatment: Intervention group: 14.21 (08.39) Control group: 13.83 (08.47)</p> <p>2. Mean score of main idea questions: Intervention group: 3.84 (1.77) Control group: 3.41 (1.91)</p> <p>3. Mean score of cloze reading questions: Intervention group: 4.39 (2.24) Control group: 4.41 (2.16)</p> <p>4. Mean score of vocabulary questions: Intervention group: 5.97 (4.81) Control group: 6.00 (4.55)</p>	(mean, standard deviation, etc.)
Are we told how were the data analysed?	Yes. The data were analysed using independent samples $t$ tests	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	The intervention was short. The participants only took part in a single class session.	
Are there implications? For teaching and learning?	The researchers of this study concluded that this study did not find an advantage of the translanguaging approach in improving English reading comprehension	
Do the implications match the study findings?	No. The design of the study was not robust enough, so this implication was not that reliable	
Are there suggestions for	Longitudinal studies are recommended	

further research?		
<b>Notes for data synthesis</b>		
Overall interpretation and comments	In this study, no significant differences between the two groups were detected. However, there was no pre-test on reading comprehension so it is hard to tell whether the two groups were different in English reading ability from the outset.	

**Reference:** Qureshi & Aljanadbah (2021)

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
2★: Matched comparison	2★: Small number of cases per compariso n group	4★: Minimal attrition, no evidence of impact on findings	1★: Outcome with issues of validity or appropriate- ness	4★: Clear intervention, uniform delivery	1★: Strong indication of experiment er effect, diffusion or other threat	1★

<b>The study:</b> (7) Sano (2018)		
<b>Date form completed:</b> 05/07/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Sano, A. (2018). The effects of translanguaging in discussion as a prewriting activity for writing in a second language. <i>ARELE: Annual Review of English Language Education in Japan</i> , 29, 193-208. <a href="https://doi.org/10.20581/arele.29.0_193">https://doi.org/10.20581/arele.29.0_193</a>	The full reference in APA citation format
Source	Google scholar	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Not reported	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	Not reported	The year and school term when the study collected the data
The place where was the study carried out	A university in Japan	The country/region/school where the study collected the data
Research topics	The effects of translanguaging on EFL writing	For example, the language skills under investigation

Research questions	What different outcomes do discussions in L1 Japanese, L2 English and in translanguaging conditions yield in generating ideas for writing in L2 English?	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	2	
Age and sex of the students	Mean age not reported Grade: not reported Sex: one female, one male	
Ethnicity	Not reported	
Languages	L1 Japanese	
Attrition	None	
Other information	The participants' proficiency was reported as intermediate level.  One student had spent a year abroad in Canada, the other student had attended a language programme in Australia for one month.	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
The researcher administered the task. All relevant information about the researcher/teacher was not reported.		
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Mixed-methods study	
Data collected	The participants' writing samples and the prewriting discussion sessions were transcribed for qualitative analyses	
Were the research instruments	Not reported	

trialled or validated in some way?		
Length of the intervention	20 minutes for each prewriting discussion condition	
Comparison to other pedagogical practices	It was compared to the other three conditions: no prewriting discussion, prewriting in English, and prewriting in Japanese	
Are there variables involved? (Where appropriate) what are the dependent and independent variable(s)?	The results were presented in numbers and percentages	Write down the variables and how the variables were measured
What other variables are 'controlled for'? (confounding variables?)	Not reported	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	Not relevant	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?	Not relevant	
What treatment did each group get?	Not relevant	Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?	Not relevant	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	Writing	

Detailed examples given	Six excerpts on prewriting discussion under the translanguaging condition were provided	The detailed examples reported such as the dialogue between the teacher and students
Resources	Students could use dictionaries when writing	
Who used the approach?	Students only	
When was the approach used?	Before writing	
What interaction was the approach used for?	Discussion between students	
How was the approach used?	Using all languages they wanted to use	Languages/gestures /emoji
How frequently was the approach used?	In only one session (20 minutes of prewriting discussion)	
<i>Learning outcomes</i>		
Language/skills assessed	IELTS Writing	
Language proficiency outcomes before and after the intervention	<p>Language proficiency before the intervention: unknown</p> <p>Type-token ratio (calculated by the reviewer) in the whole text:</p> <p>Participant 1: PWD-J (58.99%) &gt; PWD-TL (44.12%) &gt; PWD-E (41.35%) &gt; No PWD (40.97%)</p> <p>Participant 2: No PWD (49.69%) &gt; PWD-J (46.34%) &gt; PWD-TL (45.2%) &gt; PWD-E (39.33%)</p> <p>Type-token ratio (calculated by the reviewer) of content words in the whole text:</p> <p>Participant 1: PWD-J (68.13%) &gt; PWD-E (61.72%) &gt; PWD-TL (55.17%) &gt; No PWD (50.61%)</p>	(mean, standard deviation, etc.)

	<p>Participant 2: No PWD (65.88%) &gt; PWD-TL (62.3%) &gt; PWD-J (57.5%) &gt; PWD-E (56.52%)</p> <p>Content words in the sections related to PWD:</p> <p>Participant 1: PWD-J (tokens 79.1%, types 88.7%) &gt; PWD-E (tokens 36.7%, types 48.1%) &gt; PWD-TL (tokens 59.3%, types 76.3%)</p> <p>Participant 2: PWD-TL (tokens 62.3%, types 60.5%) &gt; PWD-J (tokens 52.5%, types 67.4%) &gt; PWD-E (tokens 46.1%, types 50.8%)</p>	
Are we told how were the data analysed?	Yes. The numbers of tokens and types of content words in these PWD-influenced sections were then counted using online software called <i>vocabprofile</i>	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	<p>First, the length of the intervention was short.</p> <p>The participants only took part in a single session.</p> <p>Second, the knowledge of the topics were not considered so it would be difficult to make a direct comparison of the number of words produced under each condition when varying prompts are used.</p> <p>Third, many relevant factors were not considered, such as the participants' English proficiency and the relationship between the participants</p>	
Are there implications? For teaching and learning?	Enhanced use of translanguaging can and should be extended to foreign language	

	classrooms	
Do the implications match the study findings?	This implication matched the qualitative data but not the quantitative data.	
Are there suggestions for further research?	Involve a larger sample size; consider confounding variables	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	This study had a clear process of intervention and tried to compare the learning outcomes in four conditions. However, the sample size is too small to make any meaningful statistical analysis. It was likely that the participants' performance was influenced more by their proficiency and familiarity with the topic than the intervention, so it was hard to interpret the effects of the intervention. No specific patterns of essay length or the use of content words resulted from the intervention could be observed.	

**Reference:** Sano (2018)

Design	Scale	Dropout	Outcomes	Fidelity	Validity	Overall rating
2★: Matched comparison	0: trivial scale of study, N unclear	A 4★: Minimal attrition, or no evidence of impact on findings	1★: Outcome with issues of validity or appropriate-ness	4★: Clear intervention, uniform delivery	1★: Strong indication of experiment effect, diffusion or other threat	0

<b>The study:</b> (8) Tang & Peng (2019)		
<b>Date form completed:</b> 06/07/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Tang, H., & Peng, Q. (2019). Experimental Research in Phonics Classroom Instruction of Low-Grade Elementary Students from the Perspective of Translanguaging. In <i>6th International Conference on Education, Language, Art and Inter-cultural Communication (ICELAIC 2019)</i> (pp. 147-151). Atlantis Press. <a href="https://doi.org/10.2991/assehr.k.191217.098">https://doi.org/10.2991/assehr.k.191217.098</a>	The full reference in APA citation format
Source	Web of Science	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Conference proceeding	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Not reported	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	Not reported	The year and school term when the study collected the data
The place where was the	An English training school that owned six	The country/region/scho

study carried out	branch campuses in Kunming, China	ol where the study collected the data
Research topics	The effects of using translanguaging in phonics instruction on students' comprehensive development in English proficiency	For example, the language skills under investigation
Research questions	Whether phonics classroom instruction using translanguaging is good for the low-grade elementary students in the development of their listening, speaking, reading, writing and viewing ability	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	6	
Age and sex of the students	Age: 7 years old Grade: 1 <sup>st</sup> grade in primary school Balanced gender	
Ethnicity	Not reported	
Languages	L1 Chinese	
Attrition	None	
Other information	Not reported	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
The researcher conducted the intervention. All relevant information about the researcher/teacher was not reported.		
<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Quantitative study with pretest-posttest design	
Data collected	The participants' pre and post test scores in listening, reading, speaking, writing and viewing (not specified what kinds of viewing)	

Were the research instruments trialled or validated in some way?	Not reported	
Length of the intervention	4 months	
Comparison to other pedagogical practices	It was compared to an English-only pedagogy	
Are there variables involved? (Where appropriate) what are the dependent and independent variable(s)?	Dependent variables: overall scores Independent variable: group (experimental vs. control)	Write down the variables and how the variables were measured
What other variables are 'controlled for'? (confounding variables?)	Not reported	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	The groups already existed. The students were from two classes. Class one was assigned as the control group and class two was assigned as the experimental group (not reported if it was done randomly)	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?	Not reported	
What treatment did each group get?	1/2 English, 1/4 Chinese and 1/4 material objects of pictures, video, radio, body language and any other language sign	Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?	Not reported	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		

Type of the lesson	Phonics	
Detailed examples given	“The ‘2 plus 1 plus 1’ approach used in the research means 1/2 English, 1/4 Chinese and 1/4 material objects of pictures, video, radio, body language and any other language signs.”	
Resources	Material objects of pictures, video, radio	
Who used the approach?	The teacher	
When was the approach used?	Not clear when the approach was used in each lesson and how long it took	
What interaction was the approach used for?	Teacher-whole class	
How was the approach used?	Languages and visual and audio aids	Languages/gestures /emoji
How frequently was the approach used?	Not specified	
<i>Learning outcomes</i>		
Language/skills assessed	Listening, reading, writing, speaking, viewing	
Language proficiency outcomes before and after the intervention	Overall English proficiency pre-post test scores: Intervention group: 37.17 (1.65)-96.83 (0.94) Control group: 36.67 (1.89)-85.83 (4.4)	(mean, standard deviation, etc.)
Are we told how were the data analysed?	Not specified but it can be inferred that the data were analysed using independent samples <i>t</i> tests	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	The intervention may not be long enough to evaluate the effects. The sample size is small. “Phonics not just includes the sound of letters and monograms, so the test paper is not enough concrete and detail” (Not sure what this means.	

	Does it mean the test paper should cover more aspects of phonics?)	
Are there implications? For teaching and learning?	The authors did not explicitly say the implications. They only summarised the major findings.	
Do the implications match the study findings?	No implications were discussed	
Are there suggestions for further research?	Longer intervention and more participants. Test at the local (city) level can be used.	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	This study had a teaching focus on phonics instruction but had the assessment focus on overall skills. The reason may be that the children had comprehensive English classes rather than English lessons organised by skills. The intervention seems to be interesting but it was not described sufficiently such as how much time in each lesson was devoted to the intervention. The sample size is small. The type of questions in the tests were not reported. The validity and reliability of the instrument were not reported.	

**Reference:** Tang & Peng (2019)

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
2★: Matched comparison	0: A trivial scale of study, or N unclear	4★: Minimal attrition, no evidence of impact on findings	1★: Outcome with issues of validity or appropriate- ness	1★: Poorly specified intervention	1★: Strong indication of experiment er effect, diffusion or other threat	0

<b>The study:</b> (9) Turnbull (2019)		
<b>Date form completed:</b> 06/07/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Turnbull, B. (2019). Translanguaging in the planning of academic and creative writing: A case of adult Japanese EFL learners. <i>Bilingual Research Journal</i> , 42(2), 232-251. <a href="https://doi.org/10.1080/15235882.2019.1589603">https://doi.org/10.1080/15235882.2019.1589603</a>	The full reference in APA citation format
Source	EBSCO	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Not reported	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	Not reported	The year and school term when the study collected the data

The place where was the study carried out	A large national university in Japan	The country/region/school where the study collected the data
Research topics	The goal of the present study was thus to investigate the effects of weak and strong forms of translanguaging (from an individual languaging perspective) on the production of EFL Japanese students' academic and creative composition pieces.	For example, the language skills under investigation
Research questions	What are the effects of translanguaging practices on the production of academic and creative EFL composition?	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	60	
Age and sex of the students	Age: 18-20 years old Grade: 1 <sup>st</sup> year in university Sex: 28 females, 32 males	
Ethnicity	Not reported	
Languages	L1 Japanese	
Attrition	None	
Other information	All of the participants in Class 1 belonged to the Department of Literature. The participants in Class 2 all belonged to the Department of Economics. All the participants were at an intermediate English proficiency level.	For example, socioeconomic status and students' motivation
<i>Participants (Teachers)</i>		
The researcher conducted the intervention. All relevant information about the researcher/teacher was not reported.		

<i>Methods</i>		
Methodology (Quant/Qual/mixed?)	Mixed-methods study with one test after the intervention only	
Data collected	The participants' essays and their discussion sessions (recorded and transcribed)	
Were the research instruments trialled or validated in some way?	Interrater reliability was high	
Length of the intervention	A single writing task (1 hour)	
Comparison to other pedagogical practices	It was compared to an English-only pedagogy	
Are there variables involved? (Where appropriate) what are the dependent and independent variable(s)?	Dependent variables: writing scores Independent variable: group (strong translanguaging vs. weak translanguaging vs. English-only)	Write down the variables and how the variables were measured
What other variables are 'controlled for'? (confounding variables?)	Not reported	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	The groups already existed. The students were from two classes. In each class, the students joined the writing categories randomly. However, the author did not explicitly say whether in each writing category the participants were randomly assigned to the three different conditions	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being	Not reported	

divided up like this and for this purpose?		
What treatment did each group get?	In the English-only group, the participants discussed and planned the essay only in English and the writing instruction was provided in English. In the weak translanguaging group, the participants discussed and planned the essay only in Japanese and the writing instruction was provided only in Japanese. In the strong translanguaging group, the participants discussed and planned the essay freely in both or either language(s) and the writing instruction was provided both in Japanese and English.	Specify the pedagogies and length of the treatment
Were the groups aware of the treatment?	Not reported	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	Writing	
Detailed examples given	In each condition, two detailed examples of how the participants discussed were provided	The detailed examples reported such as the dialogue between the teacher and students
Resources	Writing prompts. The English-only group received the prompts written in English. The weak translanguaging group received the prompts written in Japanese. The strong translanguaging group received the prompts written in both Japanese and English.	
Who used the approach?	The teacher	

When was the approach used?	Before writing	
What interaction was the approach used for?	Student to student	
How was the approach used?	Use any language freely	Languages/gestures/emoji
How frequently was the approach used?	20 minutes for discussion. The study only involved a single writing task for each participant.	
<i>Learning outcomes</i>		
Language/skills assessed	Writing	
Language proficiency outcomes before and after the intervention	<p>Class 1 (Department of Literature)</p> <p>Academic writing:  EO: 75.2 (7.72)  WT: 81.6 (1.56)  ST: 86.1 (1.88)</p> <p>Creative writing:  EO: 74.5 (5.24)  WT: 80.8 (4.62)  ST: 86.9 (4.16)</p> <p>Class 2 (Department of Economics)</p> <p>Academic writing:  EO: 78.9 (3.54)  WT: 80.6 (1.52)  ST: 87.6 (2.38)</p> <p>Creative writing:  EO: 75.5 (7.51)  WT: 81.0 (3.71)  ST: 88.3 (4.62)</p>	(mean, standard deviation, etc.)
Are we told how were the data analysed?	Quantitative data: A one-way ANOVA was employed to determine the descriptives and	

	<p>homogeneity of variance (Levene’s test) between groups within the same writing category. When a statistically significant variance was identified, a Tukey post hoc test was performed to determine which of the group means were significantly different. A univariate test was then employed to identify the effect size of each group. Finally, independent <i>t</i>-tests were conducted to determine any significant variations and to compare writing categories (academic and creative) and focus groups</p> <p>Qualitative data: conversation analysis</p>	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	<p>First, the scores only provided one dimension of a learner’s language and literacy abilities.</p> <p>Second, the sample size in each group is small.</p>	
Are there implications? For teaching and learning?	Strong translanguageing has the potential to result in more focused discussions and composition pieces of a higher quality than from those learners engaging in monolanguageing or weak translanguageing practices.	
Do the implications match the study findings?	Yes	
Are there suggestions for further research?	Involve more participants; examine the role of learners’ proficiency levels play on the effects of translanguageing; investigate the longitudinal effects of translanguageing	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	This study collected both quantitative and qualitative data. It was a careful attempt to differentiate between genres and between weak and strong forms of translanguageing, but this also made the sample	

	size in each group small. This study showed that translanguaging may benefit the planning stage of EFL writing and result in essays of higher quality.
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**Reference:** Turnbull (2019)

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
2★: Matched comparison	1★: Very small number of cases per compariso n group	4★: Minimal attrition, no evidence of impact on findings	2★: Not pre- specified but valid outcome	4★: Clear intervention, uniform delivery	1★: Strong indication of experiment er effect, diffusion or other threat	1★

<b>The study:</b> (10) Yuzlu & Dikilitas (2021)		
<b>Date form completed:</b> 08/07/2022		
<b>General information</b>		
<b>Item</b>	<b>Data</b>	<b>Description</b>
Reference	Yuzlu, M. Y., & Dikilitas, K. (2022). Translanguaging in the development of EFL learners' foreign language skills in Turkish context. <i>Innovation in Language Learning and Teaching, 16</i> (2), 176-190. <a href="https://doi.org/10.1080/17501229.2021.1892698">https://doi.org/10.1080/17501229.2021.1892698</a>	The full reference in APA citation format
Source	Web of Science	The database in which the study was found
Language	English	The language in which the publication is written
Publication type	Journal article	Article/book/book chapter/thesis/conference proceeding/report
Source of funding	Not reported	The name of the fund and the funder (if applicable)
<b>Descriptive data</b>		
<i>Context</i>		
The time when the study was carried out	2018–2019 fall term	The year and school term when the study collected the data
The place where was the study carried out	a high school in the north of Turkey	The country/region/school where the study collected the data
Research topics	This mixed methods research investigates the impact of translanguaging upon the development of four	For example, the language skills under investigation

	language skills–i.e. listening, speaking, reading and writing of learners whose instruction is dominated by grammar-translation instruction and by the Communicative Approach	
Research questions	<ol style="list-style-type: none"> <li>1. Does the translanguaging experience have any statistically significant effect upon the students exposed to grammar translation, in terms of their receptive and productive foreign language skills?</li> <li>2. Does the translanguaging experience have any statistically significant effect upon the students exposed to communicative language teaching in terms of their receptive and productive foreign language skills?</li> <li>3. What are the impacts of translanguaging pedagogy on learners’ perceptions of language learning?</li> </ol>	The general and specific research questions
<i>Participants (Students)</i>		
Number of students	120	
Age and sex of the students	<p>Age: pre-intermediate students (14–15 years old), upper-intermediate students (16–17 years old)</p> <p>Grade: 1<sup>st</sup> year in university</p> <p>Sex: 28 females, 32 males</p>	
Ethnicity	Not reported	
Languages	L1 Turkish	
Attrition	None	
Other information	The students were in at least the 97th percentile in a high-stake test and placed into prestigious high schools.	For example, socioeconomic status and students’ motivation
<i>Participants (Teachers)</i>		
Number of teachers	1	

Ethnicity	Not reported	
Languages	L1 Turkish. Other languages include English, French, German, and Spanish	
Shared languages with students	Turkish and English	
Attrition	Not reported	
Other information	The teacher had 17 years of English teaching experience with training in bilingualism and translanguaging during his doctoral studies	Other backgrounds related to teaching
<i>Methods</i>		
Methodology (Quant/Qual/mixed ?)	Mixed-methods study with one test after the intervention only	
Data collected	The participants' essays and their discussion sessions (recorded and transcribed)	
Were the research instruments trialed or validated in some way?	The test was piloted with another group of students. The interrater reliability analysis between the pre- and post-tests was found to be ( $r= 0.87$ ; $r= 0.90$ ) for speaking and ( $r= 0.75$ ; $r= 0.79$ ) for writing respectively.	
Length of the intervention	10 weeks (4 hours of teaching per week)	
Comparison to other pedagogical practices	It was compared to Grammar Translation Method (focusing on analysing a language) and Communicative Language Teaching (focusing on using language)	
Are there variables involved? (Where appropriate) what	Dependent variables: the participants' scores in all the four skills  Independent variable: group (translanguaging vs.	Write down the variables and how the variables were measured

are the dependent and independent variable(s)?	grammar translation method vs. communicative language teaching)	
What other variables are 'controlled for'? (confounding variables?)	Not reported	Write down the controlled variables and how they were controlled
Was the sample divided into groups or did the groups already exist?	The groups already existed. The students were from two classes. At each level, classes were randomly selected for the experimental or the control condition.	Write down how the sample was divided into groups
(Where relevant) did the groups know they were being divided up like this and for this purpose?	Not reported	
What treatment did each group get?	In the translanguaging group, there was a systematic and equal distribution of both languages for the following activities: collaborative dialogues, reading texts, listening/visual resources, project learning, research, preview-view-review, comparing texts, and word walls.  In the grammar-translation method group, instructional practices were translation of a literary passage, reading comprehension questions, antonyms/synonyms, cognates, deductive application of rule, filling in the blanks, memorization, using words in sentences, and composition.	Specify the pedagogies and length of the treatment

	In the communicative language teaching group, the activities were role plays, interviews, discussions, information gap activities, language games, language learning simulations, problem-solving tasks, quizzes, and surveys.	
Were the groups aware of the treatment?	The students in the experimental groups were aware that L1 was purposefully integrated into teaching, but the researchers did not negotiate the concept of translanguaging	
<b>Analytical data</b>		
<i>the translanguaging approach</i>		
Type of the lesson	General English lesson	
Detailed examples given	The lesson procedure was not provided	The detailed examples reported such as the dialogue between the teacher and students
Resources	Bilingual resources such as bilingual dictionaries, picture dictionaries and translation apps and websites, and word walls including frequently used terms in Turkish and English, with visuals and examples	
Who used the approach?	Both teacher and students	
When was the approach used?	The lesson procedure was not provided	
What interaction was the approach used for?	Peer and group discussion	
How was the approach used?	Turkish, English, graphic organizers	Languages/gestures /emoji
How frequently was the approach used?	50% Turkish, 50% English during the lessons	

<i>Learning outcomes</i>		
Language/skills assessed	All four skills	
Language proficiency outcomes before and after the intervention	Pre-intermediate level participants' pre- and post-test scores: Experimental group: 74.77 (6.9)-90.07 (5.34) Control group: 76.20 (5.69)-84.63 (5.41) Upper-intermediate level participants' pre- and post-test scores: Experimental group: 75.40 (4.21)-87.60 (5.31) Control group: 75.87 (4.98)-84.87 (5.22)	(mean, standard deviation, etc.)
Are we told how were the data analysed?	Quantitative data: paired samples <i>t</i> -test, ANCOVA Qualitative data: grounded theory	
<i>Conclusion and limitations</i>		
Are limitations of the study discussed? (e.g. confounding variables)	First, the study involved highly performing high school students. Second, the first author was aware of the research questions, possibly influencing the process of instruction and data collection.	
Are there implications? For teaching and learning?	The systematic flexible use of Turkish and English led to an improvement in scores and qualitative novel insights into English language learning	
Do the implications match the study findings?	Yes	
Are there suggestions for further research?	Not mentioned in the article	
<b>Notes for data synthesis</b>		
Overall interpretation and comments	The major strength of this study is that it involved two proficiency levels and compared translanguaging to two English-only approaches (grammar translation method and communicative language teaching). However, the	

	<p>study did not report the scores of sub-skills (reading, listening, writing, speaking). The study only showed the results of the overall score. This means we do not know whether translanguaging led to an advantage in each skill.</p>
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**Reference:** Yuzlu & Dikilitas (2021)

<b>Design</b>	<b>Scale</b>	<b>Dropout</b>	<b>Outcomes</b>	<b>Fidelity</b>	<b>Validity</b>	<b>Overall rating</b>
3★: Balanced comparison	2★: Small number of cases per compariso n group	4★: Minimal attrition, no evidence of impact on findings	2★: Not pre- specified but valid outcome	3★: Clear intervention, unintended variation in delivery	2★: Evidence of experiment er effect, diffusion or other threat	2★