Leveraging L2 English Proficiency to Enhance Morphological Awareness and Reading Comprehension in L3 French: An Action Research Study with Thai Learners

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Abstract

This action research examines the potential of leveraging Thai learners' proficiency in L2 English to enhance their morphological awareness and reading comprehension in L3 French. A total of 27 Thai learners with an intermediate level of English and a pre-intermediate level of French participated in the study. The research involved a pedagogical intervention aimed at increasing their awareness of morphological correspondences between French and English. It incorporated activities that highlighted crosslinguistic morphological patterns and utilized their English skills to facilitate the acquisition of French morphology. The intervention included a combination of guided observation techniques, such as input flood and textual enhancement, to emphasize morphological patterns common to both languages. A morphological awareness test comprising 48 items and a reading comprehension assessment consisting of 10 questions were administered before and after the intervention to measure its impact. The results revealed an improvement in both morphological awareness and reading comprehension in French and suggest that pedagogical interventions emphasizing morphological similarities between L2 English and L3 French have the potential to enhance morphological awareness and improve reading comprehension in L3 French.

Keywords: morphological awareness; crosslinguistic transfer; bilingual pedagogy; French language acquisition; reading comprehension

Introduction

This action research focuses on enhancing morphological awareness in French as a third language (L3) among Thai students who have at least an intermediate level of proficiency in English as their second language (L2). The study originates from the observation that Thai learners of French, regardless of their proficiency level, often struggle to identify cognates and infer meanings from lexical and morphological similarities between French and English, which in turn impedes their reading comprehension in French. This difficulty has been observed in both beginner and intermediate classes.

These difficulties may be attributed to a lack of morphological awareness, which was defined as "the ability to reflect upon and manipulate morphemes and employ word formation rules" (Kuo & Anderson, 2006, p. 161). Morphemes are the smallest units that convey semantic and syntactic information. These units include root words that can stand alone as words and affixes (prefixes and suffixes) that modify the meaning and grammatical status of the root word. For example, the word *unequal* is formed by adding the prefix *un-* to the root word *equal*.

Morphological awareness is recognized as a key factor influencing reading proficiency in both first and second languages (Carlisle, 2003; Lee et al., 2023; Liu et al., 2024). Research indicates that instruction aimed at enhancing morphological awareness can improve reading comprehension and vocabulary acquisition (Goodwin & Ahn, 2013; Nation & Bauer, 2023; Wardana, 2023). Additionally, there is growing evidence that drawing connections between languages promotes crosslinguistic morphological transfers and supports metalinguistic awareness (Cenoz & Gorter, 2017; Ke et al., 2023; Woll & Paquet, 2021).

This study hypothesizes that activating prior morphological knowledge in English and emphasizing crosslinguistic morphological correspondences between French and English can enhance learners' morphological awareness in French, thereby improving their reading proficiency. Given the significant lexical and morphological similarities between English and French, morphological instruction focused on these correspondences is particularly relevant. Both languages use affixes to form words with different meanings or grammatical functions. For example, a morphological correspondence can be seen in the addition of the suffix *-ly* in English and *-ment* in French to adjectives to form adverbs, such as *rarely* in English (*rare + ly*) and *rarement* in French (*rare + ment*).

Although research on Thai learners' morphological awareness has been conducted, particularly in relation to English, limited attention has been given to this topic in the context of learning French. This action research aims to help fill this gap by addressing the following research question: To what extent does a pedagogical intervention that activates students' morphological knowledge in L2 English positively influence their awareness of morphological correspondences between L2 English and L3 French, as well as their reading comprehension in L3 French?

Literature Review

Morphological Awareness and Reading Skills

Research studies suggest that morphological awareness is a key factor influencing various aspects of reading proficiency in both first and second languages. Carlisle (2003) emphasized the importance of developing awareness of the morphemic structure of words to improve reading, spelling, and understanding of complex words,

highlighting the importance of integrating a focus on both form and meaning when teaching vocabulary to young learners. Ke and Xiao (2015) documented the connection between morphological awareness and the development of various components of reading proficiency, including word identification, decoding, orthography, and word meaning deduction. Lee et al. (2023) found that morphological awareness is linked to literacy skills, including vocabulary expansion, word reading, orthography, and reading comprehension. Additionally, Liu et al. (2024) demonstrated a significant association between morphological awareness, particularly derivational morphological awareness, and reading comprehension.

Research also suggests that instruction aimed at enhancing morphological awareness not only expands vocabulary but also improves reading comprehension. In a meta-analysis of morphological interventions in English, Goodwin and Ahn (2013) found that such instruction has a moderate overall effect on language and literacy outcomes, including vocabulary, decoding, and spelling, when compared to control groups. Similarly, an experimental study by Thanh and Yen (2023) demonstrated that morphological instruction positively influences the lexical complexity and quality of Vietnamese high school students' academic essays, with students expressing positive attitudes toward incorporating morphology into their writing lessons. Additionally, Chen and Nordin (2024) reported that a morphological intervention they conducted among Chinese university students had a direct, significant effect on both vocabulary depth and range, as well as an indirect effect on listening comprehension. These studies suggest that as students develop morphological awareness and learn strategies for analyzing unknown words, they become more likely to apply these strategies in reading, thereby enhancing their reading skills.

Assessing Morphological Awareness

A variety of tests have been developed to assess morphological awareness (e.g., Carlisle, 2003; Chapleau et al., 2016; Kuo & Anderson, 2006; Lyster et al., 2013), with a broad range of task types used in research to measure its different dimensions. One of the most used tasks in the literature is the derivation task, in which participants are required to produce a derived form of a root word to complete a sentence. For example, participants might be presented with: *A person who is not patient is ...*, and they must respond with *impatient*. This task has been shown to assess participants' awareness of morphological structure, their ability to recognize the syntactic category of the target word, and their capacity to derive the appropriate form (Jeon, 2011).

Another commonly used task is the decomposition task, which requires participants to extract the base morpheme from a morphologically complex word. For example, they may be presented with the word *happiness* and asked to complete the sentence: *She felt very ...* They are expected to fill in the blank with the word *happy*. This task has been linked to the evaluation of participants' relational knowledge (Choi, 2015), which refers to the ability to understand how morphemes relate to one another within words and how these relationships affect meaning and form. Relational

knowledge involves recognizing morphological patterns that connect different forms of a word (e.g., *equal*, *unequal*, *inequality*).

Other tasks include the relational judgment task, in which participants are asked to determine whether two words share a morphological relationship. For example, they may be presented with pairs such as *teach* and *teacher* or *hat* and *hate* and asked to identify whether these words are morphologically related. This task assesses participants' sensitivity to relational morphology, as well as their ability to process the semantic and syntactic information encoded in morphemes (Kuo & Anderson, 2006).

In the affix choice task, participants must select the most appropriate morphologically complex word from a list to complete a sentence. For example, they may be presented with the following sentence and options: *The teacher was very ... about her students' progress in class. A. encourage B. encouraged C. encouraging D. encouragement*. Participants are expected to select option C. This task assesses participants' knowledge of the syntactic properties of affixes (Kuo & Anderson, 2006).

Additionally, several other tasks evaluate how well participants can use the semantic and syntactic information conveyed by affixes to identify grammatical relationships. These tasks include the definition task, odd-one-out task, and word analogy task.

Plurilingual Pedagogies and Morphological Awareness

Research has shown that facilitating connections between languages enhances the acquisition of second and additional languages, as multilingual learners possess a more extensive linguistic toolkit than monolingual learners (Fleming et al., 2023; Ringbom, 2006). This broader linguistic repertoire allows them to draw on their knowledge of morphology and syntax across languages, particularly when the languages share typological similarities. The use of crosslinguistic similarities to develop morphological awareness in a second language has been widely documented (De Togni, 2024; Ke et al., 2023).

Crosslinguistic similarities in orthography, morphology, syntax, and phonology serve as bridges to unfamiliar languages and facilitate crosslinguistic transfers, which can be defined as the use of knowledge from one language to enhance the acquisition of another. Cenoz and Gorter (2017) described various crosslinguistic pedagogical strategies that positively impact learners' morphological awareness. These strategies include the simultaneous use of different languages, leveraging lexical similarities and cognates, translation, and the comparison and contrast of language structures and morphology. Teng and Fang (2022) found that Japanese learners of Chinese who received translanguaging instruction achieved significantly higher morphological awareness scores compared to those taught using a monolingual approach. The learners also reported a positive perception of the translanguaging strategies used for morphology learning, mentioning cognitive and affective benefits. Zrig (2024) found that Tunisian students' knowledge of word structure in French significantly transferred

to English, improving their understanding of both similar and dissimilar English words. However, he did not identify a significant transfer of morphological knowledge from Arabic to English, emphasizing the importance of language proximity.

Other studies suggest that crosslinguistic interaction at the morphological level is possible even when dealing with typologically distinct languages. For example, Zhang (2016) conducted an intervention in Singapore aimed at developing morphological awareness and found that teaching English derivation positively affected morphological awareness in both English and Malay, as well as performance on word reading tasks.

Morphological Correspondences between English and French

Given the lexical and morphological similarities between English and French, instruction that emphasizes crosslinguistic resemblances and correspondences between the two languages appears highly relevant. Despite their typological differences, English and French share a significant vocabulary derived from Latin and Greek roots, having enriched each other through continuous exchanges over the past millennia (Sergiivna et al., 2020). The affixation processes in both languages are often similar and transparent, facilitating the identification of morphological correspondences (Paillard, 2011; Romero-Barranco, 2020). Derivational affixes are combined with base morphemes to create words with different meanings or to change their grammatical categories.

Prefixes typically convey semantic information. French and English share a significant number of similar or identical prefixes inherited from Greek and Latin. Examples include *bi-*, *ex-*, *inter-*, *kilo-*, *mega-* (*méga-* in French), *mini-*, *mono-*, *multi-*, *poly-*, *post-*, *super-*, and *trans-* (Lefer, 2010). Table 1 provides examples of prefixes and derivatives that are similar in both languages.

Table 1

English and French Similar Prefixes (Examples)

English			French		
Prefix	**Meaning**	**Derivative**	**Prefix**	**Meaning**	**Derivative**
Dis-	Opposite	*Disinfect*	*Dé-/Dés-*	Opposite	*Désinfecter*
In-/Im-	Not	*Impossible*	*In-/Im-*	Not	*Impossible*
Mi- /Mid-	Middle	*Midway*	*Mi-*	Middle	*Mi-chemin*
Pre-	Before	*Prehistory*	*Pré-*	Before	*Préhistoire*
Re-	Again	*Return*	*Re-*	Again	*Retour*

Note. Source Lefer, M. A. (2010). Word-formation in English-French bilingual dictionaries: the contribution of bilingual corpora. In *Proceedings of the XIV Euralex International Congress*. Fryske Akademy, 810-823.

The suffixes in French and English typically convey syntactic information (Menut et al., 2024). Several suffixation processes, such as nominalization, adjectival

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conversion, and adverbialization, are similar in both languages. Table 2 provides examples of the corresponding suffixation processes in French and English, which are numerous and cannot be exhaustively listed here.

Table 2

English and French Correspondences in Affixation Processes (Examples)

English			French		
Suffix	**Root**	**Noun**	**Suffix**	**Root**	**Noun**
Nominalization					
-ation	*Organize*	*Organization*	*-ation*	*Organiser*	*Organisation*
-al	*Accident*	*Accidental*	*-el*	*Accident*	*Accidentel*
Conversion to adjective					
-ary	*Imagine*	*Imaginary*	*-aire*	*Imaginer*	*Imaginaire*
-able	*Reason*	*Reasonable*	*-able*	*Raison*	*Raisonnable*
Adverbialization					
-ly	*Rare*	*Rarely*	*-ment*	*Rare*	*Rarement*

Note. Source Menut, A., Brysbaert, M., & Casalis, S. (2024). Do French speakers have an advantage in learning English vocabulary thanks to familiar suffixes? *Quarterly Journal of Experimental Psychology*.

Studies have documented the role that proficiency in English can play in facilitating the acquisition of French. In a qualitative study, Imsil (2021) demonstrated that students learning French at a Thai university are aware of their English proficiency and leverage it to enhance their French writing development. Lam et al. (2019) also investigated the impact of English learners' awareness of crosslinguistic suffix correspondences on French reading comprehension. They found that both English and French morphological awareness were related to reading comprehension and that awareness of crosslinguistic suffix correspondences was associated with individual differences in French reading comprehension. These findings highlight the importance of recognizing crosslinguistic similarities in affixation processes for developing reading comprehension skills.

Approaches for Enhancing Learners' Awareness of Morphological Correspondences

Several studies (e.g., Hassanzadeh & Shahbazi, 2021; Woll & Paquet, 2021) have documented the effectiveness of consciousness-raising instruction techniques, which utilize an inductive teaching approach in plurilingual education. These techniques allow learners to observe and identify crosslinguistic similarities, formulate hypotheses about the target language, and make inferences, thereby facilitating positive transfer between languages.

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The PACE model is an example of consciousness-raising instruction that was originally designed for teaching grammar (Donato & Adair-Hauck, 2016). The acronym PACE stands for Presentation, Attention, Co-construction, and Extension. Presentation involves introducing the learning objective through a text, whether oral or written. Attention guides learners to focus on the learning objective using guided observation techniques. Co-construction occurs when learners and the teacher collaboratively formulate explanations or infer grammatical rules. Finally, Extension provides learners with opportunities to apply the inferred rules and use the targeted forms and structures in meaningful contexts.

This model has been documented as an effective method for teaching second language grammar and morphology across various educational contexts (Li & Tuo, 2023; Okine & Zapata, 2023).

Input flood and textual enhancement, two guided observation techniques designed to draw learners' attention to specific features of the target language (White & Wong, 2024), can be effectively integrated with the PACE model. Input flood increases the frequency of targeted forms and structures in a text to facilitate their detection, while textual enhancement highlights these forms to make them more noticeable. The underlying hypothesis is that learners will more easily perceive the targeted forms due to their increased frequency and emphasis, making it easier for them to integrate these forms into the learning process. Studies have shown that these techniques improve learners' ability to identify the targeted forms (Woll & Paquet, 2021).

Together with these guided observation techniques, the PACE model provides a framework for developing activities that help learners recognize and leverage crosslinguistic morphological similarities.

Methodology

Description of the Research Context

The data for this study were collected in 2024 at an international university in Bangkok, Thailand, where English serves as both the medium of instruction and communication. The participants consisted of 27 students enrolled in a Bachelor of Arts program.

The participants were native Thai speakers with English as their L2 and French as their L3. At the time of the study, all participants had achieved at least a B1 (Intermediate) level in English, according to the Common European Framework of Reference for Languages (CEFR, Council of Europe, 2001). Their English proficiency was verified either through the course level they had completed or their IELTS scores, which were at least 5. They had also completed a minimum of 90 class hours of French and had reached an A2 (pre-intermediate) level in this language. Several challenges related to morphological awareness were observed, including difficulties recognizing crosslinguistic morphological patterns (e.g., shared affixes between English and

French), identifying cognates, and decomposing unfamiliar multimorphemic words into morphemes. These challenges affected their ability to process new vocabulary, infer meaning, and hinder their reading comprehension.

Prior to the study, participants were informed about its objectives and assured that the data collected would be anonymized and used only for research purposes. Their consent was obtained, and they were told that they could withdraw from the study at any time.

Research Design and Process

The study employed a pre-experimental design. While it follows the basic features of an experimental research design, randomization was not applied in the selection of participants, and there was no control group. This design was chosen because it was part of an action research project conducted by the researcher with their own students, aimed at gaining insights into the students' identified weaknesses and developing a remediation plan.

The research followed four steps:

1. At the beginning of the semester, participants completed a pretest assessing their morphological awareness in French, their awareness of crosslinguistic affixation correspondences between French and English, and their reading comprehension skills.
2. Over the next two weeks, a pedagogical intervention was implemented to activate participants' L2 English knowledge and skills to enhance their reading comprehension in French. The intervention was conducted over three classes, totaling four and a half hours.
3. In the following week, participants completed a post-test.

Instruments

The pretest and post-test included a test of French morphological awareness and awareness of crosslinguistic affixation correspondences between French and English, and two reading comprehension tests (one for the pretest and the other for the post-test).

Test of French Morphological Awareness and Awareness of Crosslinguistic Affixation Correspondences between French and English

The Morphological Awareness Test in French used in this study was adapted from the tests proposed by Chapleau et al. (2016) and Lyster et al. (2013). These tests were selected because they were developed in the context of research examining crosslinguistic morphological influence between English and French. Additionally, both tests have been validated through empirical research, ensuring that they reliably measure morphological awareness and provide consistent results across different studies.

The test comprised four tasks focused on morphological awareness in French and two additional tasks specifically assessing awareness of crosslinguistic affixation correspondences between French and English.

The four tasks focusing on morphological awareness in French were:

1. A derivation task, in which participants were asked to provide a derivative word by adding a prefix or suffix to a root word (e.g., *dangereux* from *danger*, *portable* from *port*) to complete a sentence.
2. A decomposition task in which participants were given a list of words made of at least two morphemes (e.g., *préhistoire*, *rarement*) and asked to decompose them into their root word and morphemes.
3. A relational judgement task in which participants were asked to determine whether two words with similar lexical frequency were morphologically related (e.g., *fille* and *fillette*, *dent* and *dentiste*, *très* and *trésor*, *table* and *portable*).
4. An affix choice task, in which participants were asked to select the morphologically complex word that best completed a sentence.

The two tasks assessing awareness of crosslinguistic affixation correspondences between French and English were:

1. A crosslinguistic affix correspondence identification task, where participants were given a list of multimorphemic English words along with their French translations and were asked to identify the corresponding affixes (e.g., *un-* and *in-* in the words *unequal* and *inégal*).
2. An inference task on morphological structures, where students were asked to determine the French translation of multimorphemic English words based on the affixation correspondences they identified in the previous task.

Each task was scored out of 8 points, for a total possible score of 48 points.

Reading Test

The reading comprehension test followed the same format as the DELF A2 (*Diplôme d'Études en Langue Française*) examination, which is the official qualifications conferred by the French Ministry of Education to certify the competency of candidates from outside France in the French language, at the A2 level of the CEFR (Council of Europe, 2001). The test comprised a set of two written documents accompanied by 10 comprehension questions, aiming to evaluate the participants' ability to understand written French texts. The DELF provides a reliable and standardized method for evaluating reading proficiency, ensuring consistency with recognized language assessment criteria. The test was scored out of 25 points.

The participants were given a maximum time of 15 minutes to complete the morphological and crosslinguistic correspondences awareness test and were instructed to attempt every question, whether they were sure about the answer or not. It was

completed during class time. The reading test was completed the following class as a part of learning activities. Participants were given 25 minutes to complete it.

Intervention

The pedagogical intervention aimed to enhance participants' awareness of affixation correspondences between French and English, equipping them with the knowledge necessary to identify the functions and statuses of French words based on their morphology and similarities with their English equivalent. The intervention was planned for three sessions, each lasting one hour and twenty minutes.

The intervention centered around three 220-word texts in French, aligned with the A2 level of the CEFR. The texts were modified using input flood and textual enhancement techniques. They were revised to include multiple instances of nominalization, adjectival conversion, and adverbialization processes that are similar in both French and English. These occurrences were underlined to make them easier to detect. Two language instructors were invited to validate the texts and provide suggestions for improvement before implementation.

Each session was centered on the analysis of one text. Participants were tasked with inferring the meaning and grammatical status of twenty underlined words within the text, such as *positivement*, *portable*, or *globalisation*. During the intervention, participants were expected to use their knowledge of English morphology to make educated guesses about the corresponding French forms, then to explicitly identify the morphological correspondences between the two languages. This process was designed to stimulate their ability to recognize morphological similarities and establish crosslinguistic correspondences.

The first session focused on cognate identification and nominalization. Participants were expected to identify that the suffixes *-tion* or *-ation*, in both English and French, are added to a verb base to form a noun. For example, the French noun *organisation* is derived from the verb *organiser*.

The second session focused on the processes of converting words into adjectives. Participants were expected to identify correspondences between the use of prefixes and suffixes; for example, the suffix *-eux* added to a noun in French corresponds to the suffix *-ous* in English, as can be seen in the adjectives *dangereux* and *dangerous*.

The third session focused on adverbialization processes. Participants were expected to identify correspondences between the use of prefixes and suffixes; for example, the suffix *-ment* added to an adjective in French, is similar to the suffix *-ly* in English, as seen in the adverbs *rarement* and *rarely*.

Each session included five phases, derived from the PACE model (Donato & Adair-Hauck, 2016) as follows:

1. Global comprehension: In this phase, participants individually answered a series of questions about the text. The objective was to familiarize them with both the meaning and form, with an emphasis on meaning. This step was followed by a group discussion to verify comprehension.
2. Guided observation: This phase aimed to help participants identify the targeted forms in the text and recognize the morphological correspondences between French and English. The focus was on form and reading for noticing. Participants were divided into groups of three. This step was followed by a group discussion in which students were asked to make guesses regarding the meaning and grammatical status of the words. By focusing on the form, participants were to notice similarities and differences between French and English and formulate hypotheses.
3. Co-construction: This phase aimed to guide groups of participants in identifying differences in word formation processes between French and English and refining their hypotheses.
4. Validation: In this phase, participants shared their conclusions regarding their hypotheses. The objective was to validate the hypotheses, reformulate the rules, provide additional examples, and address any questions.
5. Extension and evaluation: This phase provided participants with opportunities to apply the word formation rules through exercises.

Table 3 summarizes the intervention process for each session.

Table 3

Intervention Process for each Session

Phase	Objectives/ Expected Outcomes	Input and Method	Characteristics
1. Global comprehension	Introduction the learning object	Modified text; focus on meaning	Individual work; 15 minutes
2. Guided observation	Identification of correspondences	Modified text; focus on form	Collaborative work; 15 minutes
3. Co-construction	Formulation of hypotheses	Modified text; focus on form	Collaborative work; 20 minutes
4. Validation	Validation of hypotheses	Modified text; focus on form	Collaborative work; 15 minutes
5. Extension	Reuse of targeted forms	Exercises	Individual work; 15 minutes

It is important to note that British English was used both in the intervention and the research instruments. The rationale behind this choice was that British orthography aligns more closely with French than American English. For example, the British English word *globalisation* shares the same spelling as the French *globalisation*, whereas the American English equivalent is *globalization*. This similarity was intended

to help participants more easily recognize the morphological patterns between the two languages and facilitate task completion.

Data Analysis

The data analysis process involved three major steps to assess the impact of the intervention on participants' morphological awareness, awareness of crosslinguistic correspondences, and reading comprehension. First, descriptive statistics were calculated for both the pretest and post-test scores, including means and standard deviations. These measures provided insights into participants' initial awareness and reading proficiency levels, as well as any changes following the intervention.

The grid in Table 4 was used to interpret the results of the morphological and crosslinguistic correspondences awareness assessments. For the reading test results, the interpretation grid is also provided in Table 4 and is based on the A2 level descriptors from the CEFR (Council of Europe, 2001) for reading comprehension.

Table 4

Interpretation Grid for Morphological and Crosslinguistic Correspondences Awareness

Score Range	Awareness Level	Interpretation
85 - 100	Advanced Awareness	Demonstrates a deep and comprehensive morphological awareness
70 - 84	Upper-Intermediate Awareness	Shows a strong morphological awareness with only minor gaps.
55 - 69	Intermediate Awareness	Demonstrates morphological awareness but with some noticeable gaps or limitations.
40 - 54	Basic Awareness	Displays limited morphological awareness
Below 39	Minimal Awareness	Demonstrates little to no morphological awareness.

Table 5

Interpretation Grid for A2 Reading Comprehension Results

Score Range	Reading Comprehension Level	Interpretation
19 - 25	Strong (A2+ reader)	Demonstrates strong comprehension of texts at the A2 level. Can understand main ideas and specific details in familiar topics.
14 - 18	Good (A2 reader)	Shows good comprehension of texts at the A2 level. Can grasp main ideas and some specific details but may struggle with less familiar vocabulary or structures.

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Score Range	Reading Comprehension Level	Interpretation
9 - 13	Partial (A2- reader)	Demonstrates partial comprehension of A2-level texts. Can identify some main ideas but may miss specific details.
0 - 8	Limited (Under the level A2)	Shows limited comprehension of A2-level texts. Struggles with understanding the main ideas and specific details.

In the second step, paired-samples *t*-tests were conducted to test the hypothesis that the intervention led to significant improvements in participants' morphological awareness, their ability to recognize crosslinguistic correspondences between the two languages, and their A2-level reading comprehension in French.

Findings

Pretest Measures

The first step of this action research was to assess the participants' morphological awareness in L3 French, their awareness of crosslinguistic affixation correspondences between L3 French and L2 English, and their reading proficiency before the intervention.

Regarding morphological awareness in L3 French and their awareness of crosslinguistic affixation correspondences between L3 French and L2 English, test scores (out of 48 points) ranged from 17 (35.42% correct answers, minimal awareness) to 44 (91.67% correct answers, high awareness), with a mean score of 30.04 (62.58% correct answers, SD = 18.68, intermediate awareness). This significant variability among participants suggests that while some had a relatively strong grasp of French morphological structures, others were still developing these skills. This variability was also evident in scores for both morphological awareness and awareness of crosslinguistic affixation correspondences between French and English.

Scores for morphological awareness in L3 French (out of 32 points) ranged from 11 (34.37% correct answers) to 28 (87.5% correct answers), with a mean score of 19.92 (62.27% correct answers, SD = 16.67). The overall level of morphological awareness in French among the participants at this time of the study was intermediate.

Scores were the lowest on the derivation task (M = 4.09). In this task, participants were asked to provide a derived word by adding a prefix or suffix to a root word (e.g., *dangereux* from *danger*) to complete a sentence. The most frequent error occurred in the item: *Ce n'est pas réel. C'est …* (*It is not real, it is …*). The expected answer was *irréel* (unreal), and it was provided by 25.9% of participants. One possible explanation for this difficulty is that the French prefix differs from the English equivalent,

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preventing participants from relying on their knowledge of English. Common incorrect responses included *unréel* or *inréel*, suggesting that participants understood the semantic function of prefixes but applied them inaccurately in this context. This is further supported by the fact that the item *Il n'est pas patient, il est …* (*He is not patient, he is …*), where the correct answer was *impatient*, identical in both French and English, had the highest rate of correct responses (85.19%).

Scores for awareness of crosslinguistic affixation correspondences between French and English (out of 16 points) ranged from 4 (25% correct answers) to 16 (100% correct answers), with a mean score of 10.11 (63.19% correct answers, SD = 24.35). The overall level of awareness of crosslinguistic affixation correspondences was also intermediate, consistent with the participants' pre-intermediate level in French. These results suggest that, at this stage of the study, participants could recognize some morphological similarities between the two languages, though further development was necessary.

In the inference task on morphological structures, where students were asked to determine the French translation of multimorphemic English words, several types of errors were observed. A common error involved the use of negative prefixes. For instance, the word *dissatisfaction* was frequently translated directly as *dissatisfaction* instead of the correct French term *insatisfaction* (48.15% of responses). This reflects an overgeneralization of affix usage across languages. Additionally, some participants (33.33% of responses) mistakenly combined a French root word with an English affix: they chose *un-* instead of *in-*, producing the incorrect form *unégal*. This direct transfer of English affixation patterns into French suggests, as seen in the derivation task errors, that participants perceived correspondences in affixation processes at this stage.

Table 6 presents the results for each dimension of morphological awareness and awareness of crosslinguistic affixation correspondences between French and English in the pretest.

Table 6

Levels of Morphological Awareness and Crosslinguistic Affixation Correspondences between French and English in Pretest (N=27)

	Range	Means	SD
Derivation Task	0-8	4.09	2.41
Decomposition Task	0-8	5.85	2.09
Relational Judgement Task	2-7	5.18	1.26
Affix Choice Task	2-8	4.81	1.53
Total (out of 32)	11-28	19.94	5.33

	Range	Means	SD
Crosslinguistic Affix Correspondence Identification Task	0-8	5.85	2.58
Inference Task on Morphological Structures	0-8	4.26	2.23
Total (out of 16)	4-16	10.11	3.9
Grand Total (out of 48)	17-44	30.04	8.97

Regarding the participants' reading comprehension level in L3 French, test scores out of a maximum of 25 points ranged from 12 (48%) to 20 (80%), with a mean score of 15.96 (63.85%, SD = 11.71). These results indicate a generally good level of reading comprehension in French, corresponding to the A2 level. However, the significant variability in scores reflects differences in reading abilities among the participants. While some demonstrated a strong understanding of French texts, achieving scores as high as 80%, others scored as low as 48%, suggesting that they may not yet have fully reached the A2 level.

Post-Test Measures

The second step of this action research was to assess the participants' morphological awareness in L3 French, their awareness of crosslinguistic affixation correspondences between L3 French and L2 English, and their reading proficiency after the intervention.

Post-test scores (out of 48 points) ranged from 20 (41.67% correct answers) to 45 (93.75% correct answers), with a mean of 33.62 (70.06% correct answers, SD = 14.63), indicating an upper-intermediate level of awareness. Compared to the pretest results, there was an overall increase of 3.58 points. This suggests that the overall level of awareness had reached the threshold of upper-intermediate by this stage of the study. Although variability among participants decreased, it remained significant, with all participants demonstrating at least a basic level of awareness after the intervention.

In the post-test, scores for morphological awareness in French (out of 32 points) ranged from 14 (43.75% correct answers) to 29 (90.62% correct answers), with a mean of 22.63 (70.72% correct answers, SD = 12.89). This reflects an overall increase of 2.69 points compared to the pretest results. At this stage, the participants' overall level of morphological awareness in French was also at the threshold of upper-intermediate.

In the derivation task, there was an improvement in participants' ability to provide derived forms. Notably, the number of students who answered correctly increased from 25.9% to 51.85% for the word *irréel* (unreal) and from 85.19% to 100% for the word *important*. This suggests that the intervention had a positive effect on participants' understanding of French derivational morphology.

Post-test scores for awareness of crosslinguistic affixation correspondences between French and English (out of 16 points) ranged from 6 (37.5% correct answers)

to 16 (100% correct answers), with a mean of 11 (68.75% correct answers, SD = 20.21). This reflects an overall increase of 0.89 points compared to the pretest results. The participants' overall level of awareness of crosslinguistic affixation correspondences remained at an intermediate level.

The inference task on morphological structures showed improvement (from M = 4.26, SD = 2.23 to M = 4.78, SD = 2.08 in the post-test); however, overgeneralization errors persisted, with 40.74% of incorrect answers for the item *dissatisfaction* in the post-test, compared to 48.15% in the pre-test. Incorrect affix substitution also remained an issue. This persistence in errors could be attributed to the difficulty of unlearning established L2 morphological patterns when learning L3 structures, but it suggests that participants perceive the similarities between the two languages and correspondences in affixation processes.

Table 7 presents the post-test results for each dimension of morphological awareness and awareness of crosslinguistic affixation correspondences between French and English.

Table 7

Levels of Morphological Awareness and Crosslinguistic Affixation Correspondences between French and English in Post-Test (N=27)

	Range	Means	SD
Derivation Task	1-8	5.03	2.14
Decomposition Task	3-8	6.3	1.3
Relational Judgement Task	3-7	5.3	1.23
Affix Choice Task	3-8	6	1.33
Total (out of 32)	14-29	22.63	4.12
Crosslinguistic Affix Correspondence Identification Task	2-8	6.22	1.74
Inference Task on Morphological Structures	1-8	4.78	2.08
Total (out of 16)	6-16	11	3.23
Total (out of 48)	20-45	33.62	7.02

Post-test reading comprehension scores, out of 25 points, ranged from 13 (52%) to 22 (88%), with a mean score of 16.59 (66.37%, SD = 11.27), reflecting an increase of 0.63 points compared to the pretest. The variability in scores remained stable both before and after the intervention.

Comparison of Pretest and Post-test

Paired-samples *t*-tests were conducted to compare the pretest and post-test measures of morphological awareness and awareness of crosslinguistic affixation correspondences between French and English.

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Overall, the results indicated that the post-test scores (M = 70.06, SD = 14.63) were significantly higher than the pretest scores (M = 62.58, SD = 18.58), with a strong effect size, t(26) = 6.93, p < .001. This suggests that the intervention led to a significant improvement in the participants' morphological awareness and their ability to recognize crosslinguistic correspondences between the two languages.

To gain a more nuanced understanding, separate paired-samples *t*-tests were conducted for each dimension of the test.

For morphological awareness in French (tasks 1 to 4), the post-test scores (M = 22.63, SD = 4.12) were significantly higher than the pretest scores (M = 19.94, SD = 5.33), t(26) = -7.32, p < .001. This result indicates a notable improvement in the participants' ability to analyze and manipulate morphological structures within French.

Similarly, for awareness of crosslinguistic affixation correspondences between French and English, the post-test scores (M = 11, SD = 3.23) were significantly higher than the pretest scores (M = 10.11, SD = 3.90), t(26) = -3.89, p < .001. Although the gain in this dimension was smaller, the improvement was still statistically significant, indicating enhanced recognition of morphological similarities between the two languages.

These findings collectively suggest that the intervention had a positive impact on both the participants' morphological awareness in French and their ability to draw crosslinguistic connections between French and English.

A comparison for each task in the test was also conducted. Participants achieved higher scores in all six post-test tasks, as shown in Table 8. The increase was particularly statistically significant for the derivation task (t(26) = −4.35, p < .001), the affix choice task (t(26) = −4.2, p < .001), and the inference task on morphological structures (t(26) = −3.32, p < .001). However, the increase was not statistically significant for the relational judgment task (t(26) = −1.54, p = .07), highlighting an area where further intervention may be needed.

Table 8

Differences between Pretest and Post-Test Scores for Morphological Awareness and Awareness of Affixation Crosslinguistic Morphological Correspondences (N = 27)

	Pretest M(SD)	Post-test M(SD)	T	*p*
Derivation Task	4.11(2.34)	5.04(2.14)	-4.35	.001
Decomposition Task	5.78(2.27)	6.3(1.29)	-2.21	.02

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	Pretest M(SD)	Post-test M(SD)	T	*p*
Relational Judgement Task	5.11(1.28)	5.3(1.14)	-1.54	.07
Affix Choice Task	4.92(1.61)	6(1.33)	-4.2	.001
Crosslinguistic Affix Correspondence Identification Task	5.85(2.58)	6.22(1.74)	-1.67	.05
Inference Task on Morphological Structures	4.26(2.23)	4.78(2.08)	-3.32	.001

Finally, a paired-samples *t*-test was conducted to compare the reading comprehension scores from the pretest and post-test. The results indicated that post-test scores (M = 66.37, SD = 11.27) were significantly higher than pretest scores (M = 63.85, SD = 11.71), t(26) = 5.2, p < .001.

These findings suggest that the intervention had a positive effect on both morphological awareness in French and awareness of crosslinguistic affixation correspondences between French and English, as well as on reading comprehension at the A2 level of the CEFR among the participants. The results also indicate that the intervention had a greater impact on morphological awareness, particularly in the derivation task, the affix choice task, and the inference task on morphological structures, compared to reading comprehension, where the improvement, while significant, was less pronounced.

Figure 1. Pre- and Post-Test Means
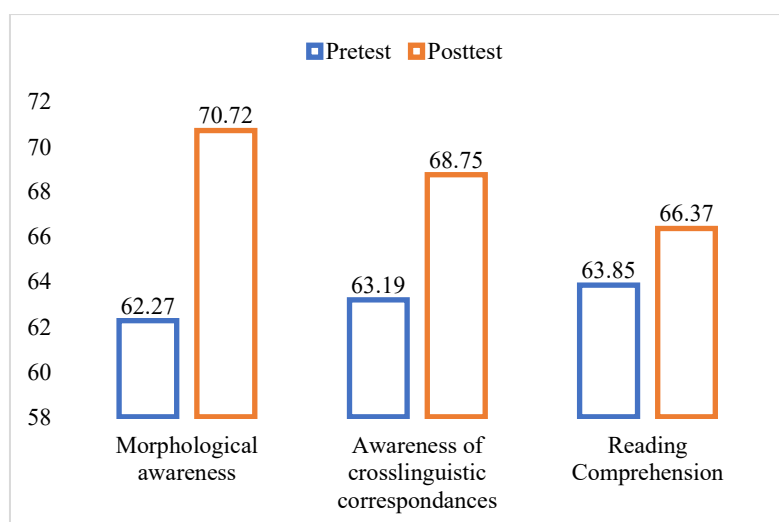
Discussion

This study aimed to explore the impact of a pedagogical intervention designed to activate students' morphological knowledge in L2 English on their morphological awareness and reading comprehension in L3 French. Specifically, it sought to determine the extent to which this intervention could enhance students' awareness of affixation

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correspondences between L2 English and L3 French and improve their reading comprehension in L3 French.

The results suggest that the intervention positively impacted students' morphological awareness in L3 French, their awareness of crosslinguistic affixation correspondences between L2 English and L3 French, and their reading comprehension in L3 French. The significant improvements observed in post-test scores across all measured dimensions indicate that the intervention was effective in promoting the activation and transfer of morphological knowledge from English to French. These findings align with previous research that highlights the benefits of crosslinguistic transfer and bilingual pedagogy in developing morphological awareness and reading comprehension (Cenoz & Gorter, 2017; Lam et al., 2019; Teng & Fang, 2022; Zhang, 2016; Zrig, 2024), which reported higher scores in morphological awareness tests for students who participated in interventions leveraging crosslinguistic resources.

The lack of significant pretest-post-test differences in the Relational Judgement task of the morphological awareness test could be due to limitations in the intervention, which may have been more effective in enhancing awareness and skills related to other tasks (Derivation and Affix choice) rather than this one. The Relational Judgement task, which assesses participants' sensitivity to relational morphological knowledge, requires a more extensive vocabulary range and depth than the other tasks. Additionally, the skills involved were not specifically targeted by the intervention, highlighting an area for improvement in future cycles of this action research.

The limited improvement in the inference task on morphological structure could be attributed to the task's complexity, as it involved higher cognitive demands and required a deeper understanding of morphological rules and structures than the other tasks.

The improvement in students' reading comprehension scores suggests that the intervention not only strengthened their morphological awareness but also enhanced their ability to understand French texts. This finding highlights the importance of morphological awareness as a component of reading comprehension and the role of crosslinguistic morphological transfer, particularly between languages with shared morphological features (Ke et al., 2023; Lee et al., 2023; Liu et al., 2024). The results further confirm that explicitly drawing attention to the morphological similarities between English and French enables students to leverage their L2 knowledge to support L3 learning. This aligns with Lam et al. (2019), who found that morphological awareness in both English and French facilitates reading comprehension.

The more significant difference between the morphological awareness tests compared to the reading comprehension tests may result from the intervention being primarily focused on improving awareness of crosslinguistic affixation correspondences. The improvement in French reading comprehension, although it did occur, was only hypothesized at the time the intervention was designed.

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Overall, the quantitative data suggest that, within the specific context of the study, the intervention focusing on form and on crosslinguistic morphological correspondences between English and French was effective in improving both morphological awareness and reading proficiency in French.

Limitations and Recommendations

This study has several limitations that must be considered. First, as an action research project, it was confined to a specific context with a limited number of participants, making the findings most relevant to this setting. Although the paired-samples *t*-tests provided an objective measure of the change in participants' performance after the pretest, an experimental study with additional objective measures, such as a control group of students with English proficiency below the B1 level, could be conducted to achieve more generalizable results. This approach would enable a comparison of the research outcomes and further validate the significance of the pedagogical intervention. Additionally, gathering qualitative data to support the intervention's impact could add depth to the findings and strengthen the case for its effectiveness.

However, despite these limitations, the findings align with those of other studies. In this regard, this action research contributes to the body of work on morphological awareness instruction by demonstrating, within the context of the study, the potential of utilizing Thai students' prior linguistic knowledge in L2 English to enhance and facilitate the acquisition of L3 French. The findings further suggest that instructors should capitalize on the proximity, similarities, and correspondences between English and French to support language acquisition. By creating connections between languages and recognizing the value of students' prior linguistic knowledge through crosslinguistic pedagogies, instructors can positively influence learning outcomes.

In a next cycle, this action research could expand the intervention to include not only reading but also writing, listening, and speaking tasks that activate L2 English morphological knowledge. This approach would allow researchers to observe the transfer of skills across different linguistic competencies. Future studies could also investigate the learning styles or patterns that enhance French morphological awareness and reading comprehension through pedagogical intervention. This could contribute to the development of more inclusive and effective language teaching methodologies.

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