

***Speak Better: A Meta-Analysis of Language Learning Modalities for Improving Speaking Proficiency***

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**Abstract**

Whether it is to improve one's job opportunities or understand the lyrics of your favorite KPOP band's latest single, the importance of knowing a second or third language is becoming more vital. Despite foreign languages being a compulsory subject in many countries' K-12 education, many language learners are unable to exceed low intermediate speaking proficiency. So, individuals are seeking to find ways to improve their speaking proficiency. Nevertheless, there are many different modalities for language learning, such as asynchronous courses, traditional synchronous university courses, foreign language housing, studying/living abroad, intensive language courses, social media platforms, and mobile applications for language learning (MALL). A meta-analysis was conducted to help learners and educators discover the most effective modalities for improving speaking proficiency. In total, 21 empirical studies involving 1,919 second and foreign-language undergraduate learners have been reviewed. These studies are selected from Education Resources Information Center (ERIC) and Google Scholar. The findings of the meta-analysis indicated that the variable which influences gains in speaking proficiency the most was not the instructional modality. Instead, the amount of time spent utilizing the language directly correlated to the learner's speaking proficiency. Therefore, more research needs to be performed focusing on the influence of the time variable in language learning.

Keywords: EFL, ESL, Foreign Language Learning, Speaking Proficiency, Higher Education, Instructional Modality, MALL

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## **Introduction**

Learning a second or third language enhances job prospects and makes international media and culture more accessible. This accessibility makes language fluency especially speaking, more and more significant in daily life. Despite this necessity, many language learners need help to exceed low intermediate speaking proficiency (Yoshida, 2016). This inability to reach fluency is even more surprising because, in most countries, K-12 education requires foreign languages as a compulsory subject. This inability to break through to the advanced level of speaking proficiency has led learners and educators to search for effective ways to improve speaking proficiency. However, with numerous instructional modalities available, including traditional university language courses, foreign language housing, studying/living abroad, intensive language courses, and mobile applications for language learning (MALL), determining the most effective approach can take time and effort.

A comprehensive meta-analysis was conducted to understand better the instructional modalities available and their effectiveness on speaking proficiency, examining 21 empirical studies comprising 1,919 second and foreign-language undergraduate learners. The studies were identified from Education Resources Information Center and Google Scholar. Additionally, the 21 studies were selected based on their investigation of varied instructional modalities for improving speaking proficiency. By analyzing these studies, this paper aims to provide learners and educators with a better understanding of the effectiveness of different instructional modalities and how they can be utilized to improve speaking proficiency.

### **What is Proficiency?**

For the purpose of this paper, fluency will be defined as the level of mastery an individual has over a language. Therefore, speaking fluency refers to the level of mastery an individual has when speaking in a language. Naturally, speaking fluency can be influenced by many variables, such as self-efficacy, language learning anxiety, and willingness to communicate.

Self-efficacy refers to a person's belief in one's self and abilities (Bandura, 1977). Self-efficacy in education can be applied to both educators and learners (Knoblauch & Hoy, 2008). Learners' self-efficacy involves learners' perceptions of their knowledge and skills and how they learn (Schunk, 2016). Thus, research has found a correlation between higher learners' self-efficacy and speaking proficiency (Liu, 2012; Yoshida, 2016).

Language anxiety is categorized as the product of adverse emotions and thoughts toward language usage and learning. Tuncer and Dogan (2015) found that in English Language Learning courses, individuals who experienced language anxiety predicted lower student achievement. However, many causes and contexts create or influence language anxiety, such as being unprepared for class (Liu, 2012).

Another variable that influences speaking proficiency is Willingness to Communicate. The inclination or readiness of a learner to participate, maintain, and initiate communication in a second or foreign language is called Willingness to Communicate (Fouz-Gonzalez, 2017). Naturally, this included a learner's motivation and confidence, linking this variable to self-efficacy and language anxiety.

Due to the varied multitude of variables that can influence speaking proficiency, self-efficacy, willingness to communicate, and language anxiety, this meta-analysis focused on examining studies that focused on improving speaking proficiency in a second or foreign language.

### **Instructional Modalities**

Instructional Modalities, in this paper, refers to the method in which students interact with instructional. In language learning, this can be anything from university language courses to study abroad programs. This paper examines explicitly: university language courses, university online language courses, immersion, study abroad, foreign language housing, and MALL.

Immersion was stated by Rifkin (2005) as the vehicle for many language learners to break through the difficult intermediate level of speaking proficiency. In the context of this study, immersion refers to all language instructional or experience, including speaking and other related curricula, that occur in a reduced time period (Swain & Lapkin, 2002).

Study Abroad is one of the popular instructional modalities used to increase foreign language speaking proficiency increased language proficiency (Serrano et al., 2011). This research defines study abroad as when they leave their native country and attend schooling in a different country. Traditionally, study abroad experiences are six months to one year (Llane & Munoz, 2009). However, two- to four-week intensive study abroad programs have been created to give students an international immersion experience without significant time and financial commitment.

Aharon and Pomson (2018) proposed that programs where participants are housed together, build trust and create unique learning and growing experience. This is precisely the aim of the instructional modality of Foreign Language Housing. Foreign Language Housing is where students live in an environment where all the participants agree only to speak a specific language (Kelling & Bown, 2020). Often, students are assigned a native-speaking roommate to assist with the immersive environment.

Kusmaryani et al. (2019) described MALL as Mobile Assisted Language Learning or incorporating technology into the instructional method. MALL can include but is not limited to Twitter, Instagram, YouTube, Speech to Text programs, Online Dictionaries, Gmail, Weebly, WhatsApp, and Google Chrome. While MALL tends to be incorporated into a traditional instructional modality, the incorporation creates a new and different instructional modality that will require more detailed investigation.

### **Methods**

The 21 studies were found using Google Scholar and ERIC (Education Resources Information Center). Studies were selected based on the following criteria:

1. The participants were undergraduate students.
2. The participants need to be learning a language outside of their native language.
3. The study examined the improvement of speaking proficiency by using a specific instructional modality.
4. The study needs to assess the instructional modality as a dependent variable in measuring the target language learning outcome, speaking proficiency.
5. The study needs to incorporate a (quasi) experimental design.

6. The study needs to establish a pre-treatment equivalency between the instructional modalities/experimental groups with an empirical measurement such as a standardized test or established survey for self-analysis.
7. The language of the study must be English.

**Research Questions:**

1. To what extent, if any, does the instructional modality influence L2 speaking proficiency in undergraduate students?
2. Does speaking proficiency gains vary based on the instructional modality? If so, how?

**Results**

Based on the criteria stated above, 21 empirical studies were found. The studies were published from 2010 to 2021 in credible language, education, technology, or interdisciplinary journals in English.

While all participants were undergraduate students learning a language, the number of participants in the surveys ranged from 14 to 229. Additionally, the language being learned varied. Many of the studies (13) researched students learning English. Four of the studies focused on more than one language. Three of the studies focused on students learning Spanish. One study focused on learners studying mandarins. Moreover, one study investigated students acquiring Russian.

Two of the studies only used a survey. The other 20 studies used a Pre-Test and Post-Test. Of the 20 studies that used a Pre-Test and Post-Test, two studies also included a survey. Furthermore, one study included an interview.

These studies focused on the instructional modalities: university language courses, intensive university language courses, study abroad, intensive study abroad, Foreign Language Housing, Online University Language Courses, and MALL, Mobile Assisted Language Learning.

**Table 1.** *List of Studies analyzed*

Author	Year	Modality	Language Learning	Participants	Measure
Baker et al.	2010	Foreign Language Housing Study Abroad Intensive Study Abroad	Spanish	48	Pre/Post Test
Dewey et al.	2013	Study Abroad	Multiple	118	Pre/Post Test and Survey
Dewey et al.	2015	Foreign Language Housing	Multiple	229	Survey
Fouz-Gonzalez	2017	MALL: Twitter	English	121	Pre/Post Test
Fouz-Gonzalez	2020	MALL: Apps	English	52	Pre/Post Test
García-Amaya	2021	Study Abroad	Spanish	31	Pre/Post Test
Jochum	2014	Study Abroad	Spanish	18	Pre/Post Test

Kelling & Bown	2020	Foreign Language Housing	Multiple	42	Pre/Post Test
Kusnaryani et al.	2019	MALL	English	38	Pre/Post Test and Interview
Martinsen et al.	2011	Foreign Language Housing	Multiple	78	Pre/Post Test
Merrill et al.	2021	Online	Russian	229	Pre/Post Test
Namaziandost et al.	2021	MALL: Online	English	81	Pre/Post Test
Nanjundan et al.	2020	MALL	English	41	Survey
Serrano	2011	Intensive	English	152	Pre/Post-test
Serrano et al.	2011	Intensive Study Abroad	English	131	Pre/Post Test
Serrano et al.	2012	Study Abroad	English	14	Pre/Post Test
Sherine et al.	2019	MALL	English	110	Pre/Post Test
Xu et al.	2014	Intensive	Mandarin	28	Pre/Post Test
Yin	2019	MALL	English	86	Pre/Post Test
Yulian	2022	MALL	English	30	Pre/Post Test and Survey
Zeinali Nejad et al.	2021	Online	English	45	Pre/Post Test

### *Intensive*

Of the 21 studies found, three studies specifically investigated the instructional modality of intensive (Serrano, 2011; Serrano et al., 2011; Xu et al., 2014). The number of participants ranged from 28 to 152 undergraduate learners. All three studies used a pre-test and post-test measure to assess proficiency gains in oral communication with a traditional university language course as the control group (Serrano, 2011; Serrano et al., 2011; Xu et al., 2014). It is important to note that all three studies maintained that the intensive university language course and the traditional university language course contained the same instruction time. The big difference was the duration of the courses.

All three studies' findings showed that both the traditional university language course and the intensive language course improved speaking proficiency (Serrano, 2011; Serrano et al., 2011; Xu et al., 2014). Moreover, all three studies found no statistical difference between the improvement in speaking proficiency between the two instructional modalities. Thus, these findings suggest that the duration of the course does not impact speaking proficiency. However, the number of instruction hours does correlate with language-speaking proficiency. More research needs to be conducted to understand this correlation better.

### *Study Abroad*

During the COVID-19 pandemic, study abroad programs were restricted due to travel bans and the risk of catching the virus, limiting the instructional modality available for students. Despite these limitations, this meta-analysis found four studies that met the research criteria (Dewey et al., 2013; Garcia-Amaya, 2021; Jochum, 2014; Serrano et al., 2012) with undergraduate participants ranging from 14 to 118 in number. All four studies utilized pre-tests and post-tests. Although Serrano et al. (2012) also conducted proficiency testing throughout the program. This testing through the study abroad program allowed Serrano et al.

(2012) to measure the learner's proficiency throughout the entire program, not just at the beginning and the end.

In contrast to the previously mentioned intensive instructional programs, the research results on study abroad are mixed. Three studies (Dewey et al., 2013; Garcia-Amaya, 2021; Serrano et al., 2011) found that speaking proficiency improved with increased time spent using the language, similar to studies on intensive instructional programs (Serrano, 2011; Serrano et al., 2011; Xu et al., 2014). However, Serrano et al. (2012) found that the most significant speaking proficiency gains occurred in the program's first three months, with continued gains at a slower pace after that. These findings of Serrano et al. (2012) indicate that intensive study abroad programs may have more benefits than traditional ones. Nevertheless, further research is necessary to uncover the validity of this indication.

Unlike the other three studies, Jochum (2014) did not find a correlation between time and speaking proficiency gains. However, Jochum's study did conclude that study abroad programs increased speaking proficiency. Further investigation is needed to determine why time did not have statistical significance in this study.

### ***Foreign Language Housing***

Like the study abroad research, four studies meet the criteria which explored foreign language housing (Baker et al., 2010; Dewey et al., 2015; Kelling & Bown, 2020; Martinsen et al., 2011;). The studies' participant size ranges from 42 to 229 undergraduate learners. Of the studies, three of the studies implemented a pre-test and post-test measure (Baker et al., 2010; Kelling & Bown, 2020; Martinsen et al., 2011). Dewey et al. (2015) utilized a self-reporting survey. All of the analyzed studies found that participating in foreign language housing was linked to increased speaking proficiency.

Similar to the studies mentioned previously (Dewey et al., 2013; Garcia-Amaya, 2021; Serrano, 2011; Serrano et al., 2011; Xu et al., 2014), Baker et al. (2010) and Martinsen et al. (2011) uncovered that time spent using the language correlates with proficiency gains. However, Dewey et al. (2015) and Kelling & Bown (2020) did not find evidence that time influenced speaking proficiency. This lack of consistency indicates that there needs to be more research.

### ***Online***

While COVID-19 may have limited research on the study abroad instructional modality, it gave rise to online instructional modality language research (Merrill et al., 2021; Namaziandos, 2021; Zeinali Nejad et al., 2021). Three studies that met the criteria chose to explore online instruction modalities. These studies' participants range from 45 to 229 undergraduate learners. The studies each showcased that utilizing the online instructional modality enhances speaking proficiency. Additionally, all three studies compared the online instructional modality with another modality. However, the comparison modality varies in each study.

Merrill et al. (2021) presented traditional university language courses compared to online university language courses. The study found that speaking proficiency improved more in the traditional university language classroom. Interestingly, the study also found that writing proficiency improves more in the online university language classroom.

The other two studies (Namaziandos, 2021; Zeinali Nejad et al., 2021) examined different types of online instructional modalities. Further research needs to be done on different types of online instructional modalities so that researchers, learners, and educators can better understand this type of instructional modality and its benefits.

### ***MALL: Mobile Assisted Language Learning***

This final instructional modality being examined has the most relevant research that met the study's criteria (Fouz-Gonzalez, 2017; Fouz-Gonzalez, 2020; Kusnaryani et al., 2019; Nanjundan et al., 2020; Sherine et al., 2019; Yin, 2019; Yulian, 2022). Thus, seven studies were found that explored the instructional modality of Mobile Assisted Language Learning. The number of participants varied from 30 to 121 undergraduate language learners.

Six of the seven studies utilized pre-test and post-test measures. One of these studies also incorporated the usage of a survey. While another study instead chose to incorporate an interview. The one study that did not incorporate a pre-test and post-test as the measure instead chose to design a survey. Despite the differing measures, all seven of the studies found that the MALL instructional modality helped increase speaking proficiency.

Although, it is difficult to compare the amount of improvement between the different types of MALL since the studies' experiment designs are so vastly different. More research must investigate utilizing MALL in a learning environment to increase speaking proficiency.

### **Discussion**

When comparing the findings of all 21 studies with regard to their instructional modality and language speaking proficiency, the answer to the first research question is found. All instructional modality used showed speaking proficiency important. However, none of the instructional modalities' speaking proficiency improvements exhibited greater statistical significance. In fact, time showed a greater correlation with speaking proficiency improvement (Baker et al., 2010; Dewey et al., 2013; Garcia-Amaya, 2021; Martinsen et al., 2011; Merrill et al., 2021; Serrano, 2011; Serrano et al., 2011; Xu et al., 2014). This suggests that the instructional modalities, while essential in motivating and engaging students, have less influence on increasing speaking proficiency. Thus, the number of hours immersed in the instructional modality matters. Therefore, it can be assumed that if learners pick an instructional modality they are interested in, they will spend more time on it. This will lead to even more speaking proficiency. However, more research needs to be conducted to confirm this assumption.

The second research question addresses whether the improvement of speaking proficiency varied based on the instructional modalities. Based on the 21 studies analyzed, there was no statistically significant difference between the speaking proficiency gains and the instructional modalities. However, it is essential to note that there are other instructional modalities that were not examined. Another meta-analysis should be conducted to confirm or challenge these findings.

It is important to note that both Foreign Language Housing (Kelling & Bown, 2020; Martinsen et al., 2011) and Study Abroad (Dewey et al., 2013; Garcia-Amaya, 2021; Jochum, 2014) can act as vehicles to produce considerable improvements in speaking proficiency due to the individual student's motivation and time spent in the instructional modality. Both of

these instructional modalities showed an extensive range when comparing the pre-test and post-test. Future research should be conducted to look at the variables of time and motivation.

## **Limitations**

Although this study provides valuable insights for improving speaking proficiency, it is essential to acknowledge that further research is necessary to validate the findings. One limitation is that the selection criteria did not include participants' native language, language learning experience, or level of speaking proficiency, which may have influenced the results. Moreover, the 21 studies analyzed in this meta-analysis employed different measures of speaking proficiency, ranging from self-reporting to interviews to standardized tests like OPIc, and the sample sizes varied greatly. Thus, measure and sample size add potential new variables to explore in the future.

Another factor to consider is the impact of the COVID-19 pandemic on language learning research. Like many other fields, language learning research has been affected, leading to a limited pool of new empirical studies to include in this analysis. Many instructional modalities, such as Study Abroad Programs and Foreign Language Housing, shut down due to the risks of this virus. Most of the limited research published during this period focuses on shifting the instructional modalities to online and perceptions like Cunico's (2021), "Moving the year abroad online: Ready, steady, go!" Therefore, conducting this meta-analysis again in two to three years with a more extensive and recent set of studies could provide a more robust and comprehensive picture of the effects of different instructional modalities on speaking proficiency.

## **Conclusion**

The present study meta-analyzed the effects of varied instructional modalities on undergraduate students' speaking proficiency. The literature search revealed 21 empirical studies that investigated the effects of an instructional modality or modalities on speaking proficiency in higher education language learners. Most of the studies assessed found that using the specific instructional modality revealed a statistically significant increase in speaking proficiency. However, the time spent using the instructional modality did correlate with large proficiency gains (Baker et al., 2010; Dewey et al., 2013; Garcia-Amaya, 2021; Martinsen et al., 2011; Merrill et al., 2021; Serrano, 2011; Serrano et al., 2011; Xu et al., 2014). Another thing uncovered in this study is that the amount of time immersed in the language also correlates with more significant language learning improvement. Therefore, Study Abroad programs and Foreign Language Housing are most effective when the participants remain immersed in the language. Further research needs to be conducted to give recommendations based on native language, level of proficiency, and language learned. Ultimately, this study confirms what teachers have emphasized for decades: the more you study, the better you perform.

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