

# Online foreign language learning: Measuring efficacy versus traditional classroom study

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## ABSTRACT

The Covid-19 pandemic precipitated a mass transfer of educational activity to the online space in many countries. While advances in internet communication technologies have allowed many educational activities to continue throughout periods of closure of traditional classroom environments, the change necessitated a sizeable shift in terms of actual language pedagogy and learning strategies. Simply put, Foreign Language Acquisition (FLA) through online activities is different from traditional face-to-face learning (e.g., Chun, Kern, & Smith, 2016). However, while research can point to various advantages and disadvantages of online vs. face-to-face classroom environments for foreign language study, it is an open question whether the online study has the potential to replace traditional classrooms while achieving a similar or even greater level of proficiency gains. This paper presents a longitudinal case study of an adult learner progressing from an absolute beginner level to an intermediate level of proficiency (CEFR-level B1) through purely online (one hour) weekly instruction over the course of two years, and using learning records; it will elucidate the learner's perceived differences between online and in-person language instruction. The results suggest that the online instruction yielded more opportunity for productive conversational use of the Target Language (TL), thus enabling the faster development of basic conversational competence compared to traditional classroom instruction.

## 1. Introduction

Online learning has become more and more prominent in the last two decades, as a variety of schools have embraced the online-mediated classroom delivery mode to meet student needs or to seek new business opportunities. The online classroom mode has been lauded for its relative flexibility, which makes it particularly helpful for people, who, due to location or timing issues, would not be able to attend traditional classroom-based models of education (e.g., Pichette, 2009). While online education offerings may have started mostly with such non-traditional students in mind, the benefits caused it to become popular even among traditional students, and the number of online courses increased precipitously even as technological advances increased the possibilities of activities and pedagogical methods that could be used online. Still, it is commonly held that online learning is no real substitute for traditional classroom-based learning for most subjects, albeit the advantages in terms of convenience offered by online education are likely to cause an ever-growing percentage of educational activities to be held online (Palvia et al., 2018). The Covid-19 pandemic, however, starting in early 2020, triggered a mass experiment in online learning, as schools ranging from pre-K to universities and across a wide variety of countries, cultures, and languages began using online education either to supplement or to wholly replace

classroom-based education as regions and countries were locked down for weeks and even months at a time. Early in the pandemic, it was estimated that upwards of 1.2 billion children worldwide had missed in-person schooling due to the pandemic, leading to the largest shift to online education ever seen, with a quarter billion students forced to switch to online education in China alone (Li & Lalani, 2020). The consequences of this sudden, forced switch in course modality were numerous, widespread, and will likely be studied and debated for many years to come. The balance of potential positive and negative effects of online vs. in-class instruction very likely depends on a great host of factors, including the subject matter being taught, student ages, the availability of technology, both students' and teachers' technological proficiency, etc. It would be entirely futile to try to holistically describe the impact of the pandemic educational policies, but instead, this paper will investigate the impact of online course technology on the narrow issue of second language (L2) study and whether there are functional differences in the learning patterns and or effectiveness of L2 study when conducted entirely online.

## **2. Theoretical basis**

### ***2.1. Online learning vs. face-to-face learning***

While technological advances have made online learning much more comparable to face-to-face learning than was the case in the early days of internet technologies 20 years ago, there are still distinctions in both processes and result stemming from the learning mode. Chun et al. (2016) point out that "[A]lthough presence still involves spatial and temporal dimensions in electronic communication, those dimensions function differently than they do in face-to-face communication" (p. 66). The fact that teachers and learners occupy different physical environments and (possibly) times might lead them to "...be occupying distinct psychological time frames" (Chun et al., 2016, p. 66). The way we interact via digital technologies is impacted by the limitations and possibilities of the platforms in-use. Early, text-based platforms, such as email, can produce the effect of 'disembodied' communication (Clark, 1999). While video conferencing platforms can enhance the real-time perception of communication, we have higher recourse to the typical visual cues that accompany face-to-face communication, such as gestures, facial expressions, etc. However, the fact that our view is typically framed by camera angles (i.e., we cannot see out of the camera frame) can negatively impact communication by denying shared reference (e.g., we might not be able to see the referent to a pointing gesture).

The lockdowns across the world resulting from the Covid-19 pandemic, however, introduced a new factor into online learning - namely compulsion. Previously, while students often chose to study online due to factors of convenience or personality (Pichette, 2009), from 2020, we witnessed a forced mass online educational endeavor in numerous countries. How did students react to the online learning experience? Surveying students forced by the Covid-19 pandemic to study, Lin and Gao (2020) found students to be actively engaged and interactive in synchronous online courses. This should be viewed in conjunction with conflicting evidence, however. Garris and Fleck (2020), likewise surveying Chinese students during the pandemic, found that students rated the forced transition to online learning negatively. Specifically, they found courses online to be less engaging and on the whole, less pleasant than in-person classes. But the question we must ask is whether online learning was effective, especially in the context of L2 study.

### ***2.2. Efficacy of online language learning***

For foreign language study, the internet seems, at first glance, to be a Godsend. The utter dependence on L2 instructors and the paucity of L2 realia which afflicted previous generations of learners have effectively been eliminated as L2 content can often be found in abundance in both spoken and written forms. Furthermore, on first consideration, the ability to study the language without the traditional time and place constraints imposed by face-to-face classroom study would

seem to be self-evidentially a good thing, but the actual data is more nuanced concerning the effectiveness of online instruction. Rachmah (2020) shows that EFL students preferred offline learning as they achieved better understanding and interaction with both peers and instructors. Likewise, Alzahrani and Althaqafi (2020) found that teachers assessed their own lack of skills and knowledge of online educational platforms could limit their teaching effectiveness.

Most articles asserting a positive effect of online learning do not seem to attribute the effect so much to the learning platform but rather to use the platform for implementing specific pedagogical methods, such as PBL (e.g., Yuliansyah & Ayu, 2021) or using specialized online learning tools (e.g., Zarei & Amani, 2018). Ultimately, such research invariably points towards a need for professional development on the part of teachers to acquire the technical and pedagogical know-how in order to make productive use of online learning technologies (De Paepe, Zhu, & Depryck, 2018). Still, some positive results have been found for online, synchronous learning. Lenkaitis (2019) found online, computer-mediated speaking practice to be effective, albeit the effect was variable according to students' language proficiency level. Likewise, Moorhouse, Li, and Walsh (2021) found that learning success was tied to teacher competency in technology, interaction, and environment management. Simply put, technology alone does not appear to significantly impact the efficacy of L2 education, but paired with a knowledgeable and skilled teacher, it can be an effective tool for knowledge transmission.

### **3. Research method**

This case study herein documents the case of a student's attempts to learn the Thai language from a beginner level over the course of two years. The information was gleaned using diary study methods, and data recorded during the learning process were also used for stimulated recall of the case subject.

#### **3.1. Participants**

The case study has a single subject - an adult male in his mid-40s working in an education-related field. The subject is a native speaker of English but has studied several additional languages to high-intermediate or low-advanced levels of proficiency. The only language he had previously studied which may have some direct relevance to the target language herein was Mandarin Chinese, as this means he had prior familiarity with a tonal language (albeit the tonal systems of Mandarin and Thai are quite distinct from one another).

The subject had undergone no prior formal study of Thai but had been to Thailand multiple times for short trips over a period of two decades for both family recreation and for work. During that time, he had learned a few phrases (e.g., greetings, basic numbers, and asking directions), so the subject cannot be classified as an "absolute beginner" at the beginning of the study; however, his communicative capacity at the time was (self-)estimated at roughly 02 - 03 dozen words. The subject was motivated to study the Thai language by two factors: 1) increasing frequency of going to Thailand for work-related matters; and 2) an increasing probability of being sent to Thailand for a longer-term (02 - 03 months) work-related matter (note: as of the time of submitting this article, this plan has been postponed indefinitely due to the Covid-19 pandemic and its ensuing impact on travel). The subject's reasoning for using online courses was purely practical, as there were no in-person Thai language classes available in the area where the subject lived. The subject purported that he had previously made plans to go to Thailand to enroll in an intensive class but was thwarted from doing so by a family emergency. While the subject commenced the online coursework just as the Covid-19 lockdowns commenced, that was purely coincidental, albeit the subject's continuing to study online into the second year was more directly attributable to the continuing effects of the lockdown policies.

### **3.2. Materials**

The subject kept records of his Thai language-learning experiences with a set format to adhere to for each lesson. Before any lessons began, the subject recorded his own history as a language learner in considerable detail, so that pre-existing attitudes and beliefs about L2 teaching and learning could be taken into account in the analysis of the data. Once formal lessons commenced, after each lesson, the subject recorded the content and goals of the lesson, as well as his reaction to the lesson, any notable events, and what he hoped to achieve in the next lesson. About once per month (although this was at irregular intervals, in practice), the subject would document general impressions of how the study was going, including detailing current frustrations and successes in the language learning process. While the subject sometimes skipped items (especially the “hope to achieve next time” category), he was quite regular in keeping records which made it simple to follow the learning activities and his (self-perceptions of) progress. Lessons made use of (but did not strictly follow) the text, *Thai for beginners* (Becker, 1995).

### **3.3. Procedures**

The subject contracted a professional Thai teacher through the language teacher/student connection service *iTalki*. For the first 02 months, the subject engaged in one hour of instruction twice per week via Skype, but once work demands were recommenced after the initial lockdown period, lessons were cut back to a one-hour, once-per-week lesson schedule. As such, the instructional time was roughly 50 hours per year. Data collection for this study halted when the study had crested 100 hours (at just over two years of instruction). After each lesson, as soon as possible, the subject was instructed to update records of his learning progress. The subject also engaged in self-study of lesson materials. The time spent in the study varied (from zero to just over 04 hours per week) according to schedule demands but averaged only about 45 minutes each week. The subject kept records of self-study times but did not use self-study as the basis of record entries (i.e., while there are time records, there is little in the way of subject reaction). At the end of the data collection period, the student took two different online Thai placement tests to determine proficiency level.

### **3.4. Analysis**

The data entries were reviewed and analyzed at irregular intervals throughout the two-year period. The entries were analyzed according to diary-study standards, looking for trends, patterns, and commonalities. Entries were also used (i.e., using stimulated recall techniques) to try to elucidate thoughts, feelings, and impressions that the subject experienced at various points of study. Through the use of these prior entries, the subject was able to directly compare his online learning experiences with that which he had previously encountered through traditional, classroom-based learning.

## **4. Result and discussion**

### **4.1. Results**

#### **4.1.1. Analysis of study records**

Analysis of subject learning records used both holistic reading and keyword/concept searches to recognize trends. Some patterns assert themselves from quite early on. As the instruction was one-on-one, the subject immediately and repeatedly pointed out that he is allowed much more time for actual use of the target language than has typically been the case with most (but not all) of his prior language study endeavors. While the subject has the sense that this is accelerating the development of speaking skills, it also frequently results in frustration - especially early on in his studies - as he is forced to converse mostly in the language, and the conversational

topics frequently range outside of his developed vocabulary. This likely precipitated a strong trend in his study habits. For the first 04 months of study, he averaged nearly 03 hours of independent study per week - mostly spent practicing vocabulary and forms from prior lessons. After the first 04 months, there was a gradual decrease in the amount of time spent in independent study, with the weekly time rarely exceeding one hour by the end of the first year of study. Analysis of concurrent data suggests that his speaking confidence was increasing markedly, and this ability to converse with less struggle likely was one of the causative factors that led to a slackening of independent study. The amount of independent study did rise strongly again for a couple of months at the beginning of year 02 of study as instruction began to focus on Thai orthography, and there have been periodic peaks and lulls, presumably due to person interests or particularly challenging lessons, but there is nothing in the record that gives direct evidence of why any of these momentary changes in patterns occurred.

Another notable pattern is asynchronous development of ability and confidence in speaking and listening skills. By the end of the first year of instruction, the subject was feeling considerable progress in his ability to express thoughts and opinions in the TL; however, he was still often frustrated by his inability to understand his teacher's responses when she spoke in normal register and speed. "I often don't understand unless [teacher's name] slows down her speech, and she frequently has to substitute words to make her meaning clear." Even if the content of the instructor's speech was entirely among the forms and vocabulary known to the learner, it sometimes "...takes a moment for my brain to untangle it." While this sort of issue is a common one for learners, it appears that the conversational development focus of the first year of study made this issue particularly acute to the subject. By the 18<sup>th</sup> month of study, he begins to note that he is feeling considerably more confident in his ability to follow the teacher's utterances. For her part, the teacher admits that upon occasion, she finds herself forgetting the subject's level limitations and blowing past them conversationally. It should be noted that this instructor is highly fluent in English, and such conversational gaps were usually repaired in short order - in the student's L1 when need be.

Finally, an interesting effective pattern pops up intermittently whereby occasional lessons are deemed "bad" or "brutal." While at least two instances are recorded wherein the conversational topic simply drifted to something that the subject felt completely beyond his ability to express an opinion on and was utterly reliant upon the teacher feeding him vocabulary to keep the conversation going, this was not usually the recorded cause of this "bad" lesson category. Instead, the student squarely directs all culpability at himself, noting that preoccupation and tiredness were reoccurring factors which could severely negatively affect his lesson performance. By the second half of the first year of study, the subject has gotten into the habit of engaging in upwards of a half-hour of review before each weekly lesson so that the prior content is "fresh on [the] brain" when it comes time for performance. Bad lesson performances are frequently accredited to the inability to review beforehand, whereupon he states that his "... brain is still more focused on getting my kids to bed than Thai." The need for concentrated reflection and recall - literally to get the brain refocused on the language learning task - seems to be pivotal for the subject's learning success. Here, we see the development of specific learning methods which are correlated to the relative success and failure of individual lessons.

#### *4.1.2. Level test results*

The subject underwent two short, informal, online assessments in order to gauge a rough level of language proficiency towards the end of the second year of study. The first assessment device tested written word and phrase recognition, and the second test was one of recognizing orally presented Thai sentences (via video recording), giving an English gloss of meaning, and, as

appropriate, determining how he would respond in Thai. The written exam yielded a result of B1, according to CEFR rankings; however, it bears noting that the subject himself felt that he had outperformed his actual ability. He claimed that the fact that the test vocabulary had fallen within his ability range was merely coincidental and that, given a different test, he would likely test more often in the A2 range. Additionally, it's worth noting that the test emphasized isolated vocabulary and not sentence reading, which could drastically change results.

The oral test demonstrated the subject to have an intermediate range of proficiency, resulting in a CEFR of B1 or B2, depending upon measurement methods (the performance was borderline B2 proficiency, but due to the limitations of the instrument, it is best to be conservative in measure). Regarding his own perceptions of speaking ability, the subject states that it is largely dependent upon the conversational topic. He practices occasionally with other Thai friends (feeling that this is a truer gauge of his ability as these friends are less attuned to the nuances of his learner-level Thai than is his instructor), and he finds that on some topics, he can converse "easily" for long periods of time without resorting to English; however, other topics break down immediately. Again, this is a fairly common experience for language learners of all levels, but it is suggestive of a relatively high degree of conversational confidence that the subject describes engaging in conversation for 30 - 40 minutes at a time without "much or any" reliance on codeswitching or the like.

#### *4.1.3. Direct comparison of online and in-person learning*

The most immediate contrast between online and in-person language study that is elucidated by this case study is the accelerated development of speaking skills. If we compare the number of hours of instruction (100) with the guideline estimates of the number of instructional hours needed to achieve promotion from one level to the next according to the CEFR guidelines established by the Cambridge University Press guidelines (e.g., Cambridge University Press, 2018), the results do appear impressive. According to the CEFR guidelines, one typically needs between 190 and 250 cumulated "guided learning hours" to progress from a beginner level to B1 proficiency. Furthermore, progressing to B2 requires between 350 and 490 hours. Any way one looks at this case, the subject progressed quite quickly in speaking competence. Even when we include self-study work, this raises the amount of learning hours to a total of 175 (based upon an estimate of 100 weeks at an average rate of 45 minutes per week). One could easily assume there was some under-reporting of engagement in Thai language practice - for example, outside conversational use with Thai friends is noted in the study records, but hours and dates are typically not recorded (i.e., the subject sometimes recorded reactions or things learned in outside conversation, only), but it is extremely unlikely that this would double the hour count. We could probably easily pad the total study time to 200+ hours, but this would still fall short of the typical pattern of language acquisition. It is likely that, as the subject assumed for the writing test, the assessments erred on the high side. However, even with that caveat, we can still see an accelerated rate of learning. If the subject's reading ability is only at the A2 level, that would only require 90-100 hours to achieve, but it must also be kept in mind that the subject only began formal study of Thai literacy from the second year of instruction, therefore restricting the input to a maximum of 50 hours of instruction (and in reality far less, as lessons only concentrated on teaching reading for 10 weeks; thereafter, classes used Thai orthography exclusively - in contrast to the Romanization previously employed - but often were directed more towards developing speaking skills). Likewise, if we assume speaking/listening competence to be at the B1 level, this would fit more easily within the parameters of the CEFR guidelines. The problem is that the testing suggested that the subject has not barely achieved B1-level proficiency but instead is rapidly closing in on the B2 target. In other words, the subject performs at a level of oral competency more typically found in learners who have completed upwards of 100 hours more instruction than the subject received in even the most charitable definition.

#### **4.2. Discussion**

The results, while encouraging regarding the potential of online learning, should be seen with heavy caveats, which will affect how broadly we can extrapolate the findings. The subject does assert that the development of oral proficiency seemed to occur much more rapidly than he had ever experienced in prior language learning outside of the target community (he notes that he previously began studying one of the languages he speaks in a country that speaks the TL, and in his opinion, his rate of progress was much faster). He attributes the rate of acquisition mostly to the student-teacher ratio. In all but one other case of the language learning experience, he had studied in classes ranging from 05 - 30 students, and as such, he had had less time for direct conversational practice with the teacher. In the current study, “practically every minute of every course hour” was spent either listening to or speaking the language. He had only once before had face-to-face, one-on-one course instruction in another language as a beginning learner, but as that learning endeavor only lasted about 04 months before the subject had to abandon his studies, he said he could not productively compare the two experiences. He “felt like” his progress in Thai was faster than that previous language learning experience, but as it had been 18 years since then, he had no real tangible evidence that that was the case.

It is also notable that, in contrast to every other language learning experience that the subject had to date, the subject of writing had been ignored for the entire first year of instruction, and the classes had focused on vocabulary development and speaking skills. The subject was relatively positive about this approach. “Every [other foreign language] class I’d ever taken focused on writing right off the bat.” He expressed that “...in most classes in [his own country] I felt like I could learn to read and write pretty well, but I never felt like I could talk decently from classroom study alone. Invariably, I had to go to the country where the language was spoken and live there for a while. After that, I’d feel pretty good about my speaking ability.” This concentrated approach may well have had the effect of accelerating the development of conversational skills. If we assume that the subject’s prior classroom experiences split time evenly among developing the four skills, suddenly, the subject’s seemingly accelerated progress in speaking skills makes more intuitive sense, as the CEFR guidelines would entail roughly half of those hours having been spent on reading/writing tasks.

The fact that the course was online is only truly noteworthy in the sense that it did not seem to have any appreciable effect - whether positive or negative. While there were a couple of dates noted where connection issues marred the efficacy of the lesson, by and large, the lessons functioned in an almost identical fashion to face-to-face lessons, and the accelerated rate of learning is more intuitively attributable to the pedagogical decision to delay the instruction of literacy skills, as well as the fact that the one-on-one structure inherently allowed for significantly more conversational practice time. While classroom instruction frequently relies on peer-to-peer conversational practice, the subject freely admits that he never liked practicing with classmates, and that he found it easier to be adventurous and to take risks in the language when talking freely with the instructor, and this likely facilitated his learning. It also allowed him to take greater control of his learning, for example, requesting certain phrases that he knew he often employed, as well as specific grammatical items (e.g., the passive marker) long before they would have likely been presented in more formal classroom instruction. While this type of pedagogy could be conducted just as easily in a face-to-face environment, it is notable that the development of internet communication technologies has allowed for a comparable classroom experience via distance learning. In the learner’s words, “this is the first time I’ve managed to learn to converse this well without traveling to and living in the country [where the TL is spoken].”

## 5. Conclusions & recommendations

As with all case studies, it must be noted that the low number of subjects (i.e., one) precludes extrapolating results to a wider population but instead suggests that this is worthy of investigation on a wider scale. While it is entirely possible that this particular subject is an anomalous learner, such is unlikely. While the subject, as one who has studied several languages to high levels of proficiency before, could credibly be assumed to have certain advantages in learning, which may have positively influenced his rate of acquisition, the total effect of such aptitude issues is likely small. The learner likely did have a better idea of what he personally needed to learn (especially during early instruction, where he admits to having guided the teacher in terms of topics and grammatical items to suit his own conversational needs) than a student would have without a background of language learning. Also, his instructor did assert that he grasped Thai tones much more quickly in the early days of instruction than she typically saw from Western learners - an effect which both of them attribute to the subject's previous study of Mandarin Chinese. Still, the accelerated pace of learning seems much more directly attributable to the amount of speaking time that the one-on-one learning format enabled than to a generalized language talent. While the subject may have more easily grasped certain language concepts, using them still requires considerable practice, and it strains credulity to suggest that, for instance, having a tonal language background would put the learner upwards of 100 hours ahead of other learners.

Learner motivation could have also potentially influenced results, and as the current study made no attempt to measure the subject's level of motivation at any point, it is impossible to say how much effect this might have had. The subject describes himself as "relatively highly motivated," but admits that motivation has risen and fallen regularly throughout the two years of study. Additionally, the type of motivation seems to have shifted. While the initial motivation for study was largely instrumental (i.e., for work), the subject admits that he has long since surpassed his initial goals and is continuing study simply because "it's fun."

In the end, this case study suggests that online language learning with a human interlocutor/instructor has at least the same potential to facilitate L2 acquisition as does face-to-face interaction and instruction. The current study demonstrates an accelerated development of oral proficiency - a result likely pedagogical in nature, as the first year was devoted entirely to speaking/listening practice. The fact that the course was online was not the decisive factor that accelerated learning, but it was the decisive factor that enabled the pedagogical approach which likely caused that acceleration. Put simply, if the subject had had the possibility of enrolling in formal (face-to-face) Thai classes, there would have been a much lower chance of having the same pedagogical opportunities as the class may have had multiple students (which would have diluted speaking time) or the formal environment might also have nudged the teacher towards a more traditional approach to language pedagogy. While this is conjecture, it is notable that despite having a long track record of studying various languages, the subject asserts that this was the first time he had encountered a 100% conversationally focused and student-centered approach to language learning, and he believes that the online platform uniquely facilitated this approach.

While the current study was spread out over a two-year span, it is entirely possible that a similar instructional design could yield similarly accelerated conversation skill acquisition in a more compressed timeframe through intensive instruction. If such were borne out, it would suggest that 1) the suggested timeframe for language learning could be substantially scaled downwards, at least if the learner is concentrating on certain language skills over others (e.g., focusing on speaking); and 2) it might be more effective for university/adult language programs to focus a period of beginning instruction on the development of speaking/listening skills, and to bring in literacy skills later after conversational proficiency is established (especially in the case of languages whose orthography differs greatly from students' L1).



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