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EFL LEARNING ATTITUDES AND INVESTMENT IN HIGHER  
EDUCATION: THE CASE OF PRE-SERVICE TEACHERS FOR  
LEARNERS WITH SPECIAL NEEDS.

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EFL Learning Attitudes and Investment in Higher Education: The Case of Pre-Service  
Teachers for Learners with Special Needs.

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## ABSTRACT

Education changes the course of an individual's life. The French scholar Pierre Bourdieu explained that education results from interactions between cultural, economic, and social aspects of a person's life (Bourdieu, 2011). Learning investment is important in any field because it promotes the development of the necessary competencies in every learner (Norton Peirce, 1995). For second language learners, there are always individual expectations that will be the driving force to put in time and effort that will be rewarded at the end of the process. The objective of the present study is to explore the attitudes towards compulsory language learning and the impact on the level of learning investment in higher education students that will not be related to language teaching in their professional lives. It is necessary to know what factors underpin the relationship between attitudes towards compulsory English as a Foreign Language (EFL) learning and language learning investment among higher education students from programs which are not related to the EFL profession.

Qualitative research has been conducted related to language teaching and investment in different contexts with learners with different interests. However, this is a mixed methods study with an explanatory sequential design to collect quantitative and qualitative data. Based on other researchers' findings regarding the design of useful instruments, two Likert-scale questionnaires were designed and validated to explore attitudes using five dimensions: multilingualism, English learning, English classes, personal development, and professional benefit. Four dimensions of learning investment that were identified in qualitative research were also explored: motivation, necessities, engagement, and agency. Content, construct, and convergent validity were achieved and the relation between dimensions was examined. Also, the internal consistency and inter-item correlation were checked in the questionnaires. Besides, an interview was designed to complement and explain the quantitative findings.

The exploration of the four dimensions of investment through various non-parametric analyses and the interview revealed that motivation, engagement, and agency promote language learning investment. Nonetheless, necessity poorly contributed to language learning investment as the participants do not identify a strong necessity of

learning the language in relation to their profession. Findings made evident that the connection between necessities and expectations promote positive attitudes that help to foster language learning investment.

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## RESUMEN

La educación cambia el rumbo de la vida de un individuo. El erudito francés Pierre Bourdieu explicó que la educación es el resultado de las interacciones entre los aspectos culturales, económicos y sociales de la vida de una persona (Bourdieu, 2011). La inversión en el aprendizaje es importante en cualquier campo porque fomenta el desarrollo de las competencias necesarias en cada alumno. En el caso de los estudiantes de segundas lenguas, siempre existen expectativas individuales que serán la fuerza motriz para dedicar tiempo y esfuerzo que se verán recompensados al final del proceso. El objetivo del presente estudio es explorar las actitudes hacia el aprendizaje obligatorio de idiomas y el impacto en el nivel de inversión en el aprendizaje en estudiantes de educación superior que no estarán relacionados con la enseñanza de idiomas en su vida profesional. Es necesario saber qué factores sustentan la relación entre las actitudes hacia el aprendizaje obligatorio de lenguas y la inversión en el aprendizaje de idiomas entre los estudiantes de educación superior de programas que no están relacionados con la enseñanza de los mismos.

Se han realizado investigaciones cualitativas relacionadas con la enseñanza de idiomas. Sin embargo, éste es un estudio de métodos mixtos con un diseño secuencial explicativo para recopilar datos cuantitativos y cualitativos. Con base en los resultados obtenidos por otros investigadores respecto al diseño de instrumentos útiles, se diseñaron y validaron dos cuestionarios de escala Likert. El primer cuestionario para explorar actitudes de los estudiantes utilizando cinco dimensiones: multilingüismo, aprendizaje de inglés como lengua extranjera, las clases de inglés, desarrollo personal y beneficio profesional. El segundo cuestionario exploró cuatro dimensiones de la inversión en el aprendizaje que fueron identificadas en estudios cualitativos previos: motivación, necesidades, compromiso y agencia. Se comprobó la validez de contenido de constructo y la validez convergente lo que permitió examinar la relación entre las dimensiones. Asimismo, se comprobaron la coherencia interna y la correlación entre ítems de ambos cuestionarios. Finalmente, se diseñó una entrevista para la obtención de datos cualitativos que ayudaran a complementar y explicar los resultados cuantitativos.



La exploración de las cuatro dimensiones de la inversión mediante diversos análisis no paramétricos y la entrevista revelaron que la motivación, el compromiso y la agencia promueven la inversión en el aprendizaje de idiomas. Sin embargo, la necesidad contribuyó escasamente a la inversión en el aprendizaje de idiomas, ya que los participantes no identifican una necesidad para aprender el idioma en relación con su profesión. Los resultados ponen de manifiesto que la conexión entre necesidades y expectativas promueve actitudes positivas que contribuyen a fomentar la inversión en el aprendizaje de idiomas.

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## Chapter 1: Attitudes and Investment in EFL learning

This chapter introduces some details about the educational situation regarding language learning goals and policies that impact language learning in different contexts. Next, the theoretical framework of cultural capital introduced by Bourdieu is presented and its relationship with the construct of language learning investment. Then, an explanation of the bases of investment and attitudes in relation to language learning is developed including different points of view depending on the learners' needs. After that, the research gap is identified and finally, the objectives and research questions are presented.

### 1.1 Education, Policies, and Innovation

Education is what allows people to have a better life, and makes citizens aware not only of their rights, but also of their obligations (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2017). Education is a matter of global preoccupation and countries are working with international organizations to design proposals and implement new educational policies which could increase the quality of education and contribute to reach equity, and inclusion (Burns & Luque, 2014; Organization for Economic Co-operation and Development [OECD], 2010; World Bank, 2018). The United Nations Sustainable Development Goals Report (United Nations [UN], 2020b) tracks the progress for Objective # 4 about quality education for 2030, which had a negative impact on its targets due to the pandemic. The data presented by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020) showed that this world crisis is nullifying years of progress (UNESCO, 2020a). A new plan of action is urgent to compensate the loss.

The UN goals are ambitious, but achieving gains in these areas may be more difficult than originally thought because increasing the money earmarked for educational services does not always guarantee better results. The World Bank (WB) works with many countries trying to improve management and develop an international cooperation network to learn from each other's experiences, share knowledge and find likely solutions to similar problems (World Bank, 2018). Innovative policies that promote sustainable changes to satisfy the needs would be favorable (Vincent-Lancrin et al., 2019). Thus, change, growth, and development in education are needed to favor excellence and

competitiveness. According to Shapiro et al. (2007), one role of innovation is to foster social development and economic growth with new educational policies that contribute to form active citizens, promote quality, equity, and better outcomes (Serdyukov, 2017). Innovation in education has been considered a “key driver” for development and growth as Shapiro et al. affirm. Not only higher education, but also primary and secondary education, vocational education, training colleges, and polytechnics have the role of developing skills for the workforce. That is why, innovative solutions need to be congruent with the educational needs and adapted to each context (Shapiro et al., 2007). Educational innovation is attached to change and improvement. An important goal indicated by the education reforms in Mexico is the learning of English as a second language to increase opportunities for all. In Mexico, new policies have sanctioned EFL learning in all levels; nevertheless, the question that needs to be asked is: how has this reform been accepted by higher education students?

### **1.1.1 The Theory of Cultural Capital**

Education plays a crucial role for any individual because it shapes different aspects of a person’s life. French scholar, Pierre Bourdieu’s theory of cultural capital and education draws on the interactions of cultural capital and economic capital (Bourdieu, 2011). This author explains how cognitive schemes, values, and affections influence the cultural capital of individuals. The cultural capital refers to different skills, tastes, and resources related to what the individual has been able to interiorize since childhood through being part of a social class (Chacón et al., 2015). All the knowledge, traditions, routines, and abilities that are learnt within the family and society can be understood as the *habitus* (Bourdieu, 2011). This same author explains that *habitus* starts developing at a young age. Besides, there is an inevitable distance between different social spaces where people are distributed according to the capital they own. The economic capital refers to monetary resources the individual or family possesses, and it is related to the cultural capital as it can be transformed when is invested in education (Bourdieu, 1987). This means that there are people with large economical capital such as businessmen, or cultural capital such as professors and professionals that contrast with day workers with no formal qualifications. It is understandable then, that at different economic statuses,

there are different ways of living, dressing, preferred activities, jobs, and even common drinks among people which are indicators of the social capital. Consequently, schemes, values, affections, and knowledge unify a group of individuals with the same lifestyle at one economic status. This is the reason that links the cultural capital to the economic capital (Bourdieu, 2011) which creates different educative conditions (Gayo, 2013).

The relation between cultural and economic capitals goes beyond the social space and impacts the field of education. For instance, the more educational level and economic resources there are in a family, the more cultural capital they have. Furthermore, the parents transmit the knowledge they have to their children. Learners who already possess cultural capital inherited by their families, could decide to continue searching for learning opportunities to access to the cultural capital they strive to reach (Lu et al., 2020). On the contrary, in a low-income family, with parents who had difficulties to attend university, and they only studied to get a job and join the working forces, there is a high possibility that their children may follow the same path (Gayo, 2013). This may be unfair, but it is the reality within the social space that is delineated by statistical distribution which is based in the relation between the cultural and economic capitals (Bourdieu, 2011).

This educational inequity affects students from all the economic strata and their access to higher education (Bourdieu & Passeron, 2009). At this level, the concept of linguistic capital becomes important if the students want to continue to higher levels of education. Moreover, comprehension and proficiency of the language are of utter importance and make the difference between those who do not meet the average standards and outstanding students. There is a relation between the level of vocabulary and comprehension of complex structures. There are differences among students that show a direct relation between the cultural capital and success (Bourdieu & Passeron, 1996). The differences influence the selection of students who can reach the highest levels of studies. Having a broader economic capital, fosters having better education opportunities and a relation with success can be identified (Bourdieu & Passeron, 1996). Consequently, those individuals who have invested in their education are able to monetize the effort and time they have put on it (Bourdieu, 1987; Cerón, 2019). Then, in the process of investing in their education, they can restructure relationships in the social context (Lu

et al., 2020). In line with the previous ideas, for the present study, learning a foreign language gives higher education students the opportunity to access up-to-date information, to achieve higher qualifications and in the end, to receive better job offers. It would be interesting to identify whether aspects of the cultural and economic capitals influence language learning investment in higher education students in Mexico.

There is a possibility that a higher value should be attributed to the learning of a second language than learning in one's mother tongue (López-Gopar & Sughrua, 2014). As López-Gopar et al. (2022) explain, in Mexico a special value is given to formal education, which allows the individual "to be somebody in life" (p.1) and one element included in the formula to be successful in life is English. In their work Clemente and Higgins (2008), explain there are relations among the language learned, the social and cultural context, agency and identity that cannot be ignored. Each learner has an identity in relation to their own mother tongue and when they learn English, they keep their mother tongue accent and culture. The important fact is to be capable of communicating in another language and it does not imply the learner has to adopt the culture that comes with it. Each learner appropriates and redefines the use of English to cover the necessities within the own social and cultural contexts. As Clemente and Higgins (2008) expressed, while investing in learning English the individuals modify their cultural capital, becoming agents to direct their learning and, in the end, reconstructing their own identity.

On the one hand, the changes in the linguistic capital caused by acquiring new knowledge learning a foreign language, might bring attached some other changes in the social and economic class position in the future of everyone involved in the learning process. On the other hand, new policies and reforms in Mexico have turned English into a compulsory subject in the curriculum. The National English Program (Programa Nacional de Inglés, [PRONI]) (SEP, 2011) and other recent reforms were presented in the new educational model (SEP, 2017, 2022). The new model includes English to comply with international efforts to achieve quality, equity, and inclusion in education.

An interesting situation emerges if it is considered that English has been included in the curriculum. Is it possible to achieve the new goals? Is it possible to implement the changes? In public elementary schools all over the country it has not been possible "due

to funding, working conditions, teachers training, and limited textbooks and materials” (López-Gopar et al., 2022, p. 2). A similar situation occurs in middle schools and high schools. So, in the end what are the expectations for higher education students? What attitudes and investment do higher education EFL learners show when they face compulsory language education? The qualitative component of the study allowed the participants to expand and clarify the answers obtained with the scale questionnaires. With the interviews was possible to identify the associations between subthemes as mentioned before. The findings are presented by dimension.

## **1.2 Investment, Attitudes and Language Learning**

### **1.2.1 Investment**

Economic and family support in conjunction with personal will, may help an individual to achieve new goals. Moreover, reaching higher levels of education can bring changes to their social context. Based on Bourdieu’s ideas, investment, a new construct was first presented by Bonny Norton in the mid-nineties (Norton Peirce, 1995). Investment in learning is related to the will of the learner to learn something expecting to have something in return after the amount of effort required. Furthermore, this author affirms that learners will show interest in learning as they notice the benefits and they recognize the value for the cultural and social power that investment entails. In the case of a second language, the interest is related to the “desire to speak it” (Norton Peirce, 1995, p. 9). As stated by Norton et al. (2020) investment implies commitment to learn and a personal engagement in the learning process. Consequently, activities that produce interest and positive feelings could result in good behavior that increases the effort invested by the learner and in the end, better results or achievements can be recognized. As claimed by Norton and Toohey (2011), in other words, investment is the learner’s commitment to learning and learning investment helps the person to move to a higher status. Currently, institutions are putting a lot of effort to give everyone the opportunity to learn the language because it may create opportunities for people. Learning a second language is also seen as necessary for social interaction and integration to a community (Juexuan et al., 2020). Investing in becoming bilingual implies investing in language learning and in the

development of personal and professional identity because social productive interactions may occur (Ali, 2020).

Educational investment is a construct that permeates upon different agents of education: students, teachers, and administrators. They create conditions for students to be involved in education. Some studies have been conducted to explore the level of language learning investment that students show when they are exposed to a second language in the context of the target language and what it shows is that language learning investment is connected to the students' needs to communicate and interact in the target language (Ali, 2020; Carlioni & Sisti, 2019; Darvin & Norton, 2015). In the case of the students exposed to the language in a foreign language context, what research shows is that learners make an investment when learning the language is seen as a necessity, for instance to travel abroad, to continue studies or just because they like the language (Ali, 2020).

Language learning investment is related to motivation and emotions. Learners invest in learning because "they will acquire a wider range of symbolic and material resources, which will in turn increase the value of their cultural capital and social power" (Darvin & Norton, 2015 p. 37). These resources range from language, education and friendship to capital goods, real estate, and money. Learners will be engaged and willing to continue learning as long as they see the benefits. When learners are motivated to continue learning, is when investment in language learning produces good outcomes that act as positive feedback to the process (Darvin & Norton, 2015). In this positive cycle, investment might result in benefits to the economic capital such as employment opportunities. In the end it can be understood that investment is the action resulting from the interaction of motivation and commitment to learn fostered by the feeling of self-efficacy and satisfaction caused by the benefits detected in a process. Investment shows the commitment to learning and its contribution to social interaction (Carlioni & Sisti, 2019).

In recent times, educational settings for language learning have changed in several ways. According to Vu and Do (2021), learning a second language is more common in educational settings all over the world, and learners learn what they need to communicate with other people whether native speakers or not. As these authors state, English "is no

longer controlled by English native-speakers” (p. 18). Due to globalization, it is now used in cross-cultural communication, and what is being taught changes according to the social and cultural needs of the users. Actually, EFL users have the right to use the foreign language to express their unique and changing identities, to have new work opportunities and acquire symbolic capital, what brings us back to Bourdieu’s concepts of cultural, economic and social capital that are closely related to communicative competence and professional success. Burke et al. (2017) claim that theoretically and practically the economic capital is an outcome of learning investment.

### **1.2.2 Attitudes**

As described by different authors, attitudes are evaluative orientations or beliefs. Some authors have contributed to define the concept of attitudes. Gardner (1985) considers that attitudes rely on evaluative appreciations based on beliefs. Artamonova (2020) states that the individual’s feelings and beliefs impact on the individual’s behavior.

Attitudes can be reactions produced after the evaluation of objects or situations. In turn, Taylor and Marsden (2014) explain that there is a relation among behaviors, attitudes, and the subjective perceptions of different situations. As explained by Lightbown and Spada (2006), research carried out by authors such as Masgoret and Gardner (2003) and Gardner and Lambert (1972) has already established a relation between attitudes, motivation, and language learning. These authors explain that it is complicated to determine what comes first, positive attitudes or successful learning because other existing factors intervene in the response and finally impact on second language learning. Nevertheless, as these authors indicated, the necessities, social facts and ambitions regarding personal and professional contexts promote positive or negative attitudes on language learners. When there are positive attitudes, they trigger a positive cycle that makes the learner feel motivated enough to continue learning to achieve the goals. In the end, positive attitudes promote success.

Artamonova (2020) suggests that “motivation comprises reasons for behavior, and attitudes that influence motivation” (p. 808). As she explains, there is an idea that attitudes give the affective support that is required to maintain learning motivation in the students. In another vein, Lightbown and Spada (2006) state that communicative needs and

attitudes towards a second language are factors that define motivation. The point is that attitudes and motivation have been studied together. Moreover, attitudes can be considered as part of motivation, so it is frequent to find studies that use the terms interchangeably (Artamonova, 2020).

Motivation and attitudes towards language learning have been studied in groups of people that are willing to promote intercultural communication with the community they are living in, this means they are interested in social interaction (Norton et al., 2020; Norton & Toohey, 2014; Pierce, 1995). The willingness to communicate increases motivation and the desire to engage and use the language (Dörnyei, 2003). Attitudes towards learning the language are important, and to promote good attitudes the language teacher and the course play an important role (Artamonova, 2020). It is a good strategy to vary the activities, materials, and tasks in the classroom to increase learners' attention and promote a good learning experience. Consequently, the latter is important to be considered because previous learning experiences are the origin of perceptions, beliefs and evaluative appreciations that generate positive or negative attitudes (Lightbown & Spada, 2006). Besides, in a monolingual context where English is a foreign language, disposition of the participants is a crucial influence for the effort and investment in learning (Dörnyei & Ushioda, 2011). There are different activities or approaches that promote positive language-related values and attitudes. In relation to L2 learning Dörnyei and Ushioda (2011) adapted Eccles and Wigfield's (1995) value typology and identified three dimensions. First, the intrinsic value associates language learning with the individual's interest and enjoyment that helps to enhance curiosity towards language activities. Second, the intercultural value which involves social, cultural, and ethnolinguistic interests, and third the instrumental value that is related to the achievement of other goals as a result of learning a second language (Dörnyei & Ushioda, 2011). To sum up, learners' beliefs and attitudes; teachers' motivation, the kind of tasks and class activities and the learning strategies students apply; and the individual's social and professional ambitions, contribute to make a difference in students' attitudes, motivation, and behavior (Dörnyei, 2003).



In relation to what was mentioned above, different groups of language learners have been explored in previous research. The first group is composed of those who need to learn the target language because they are immersed in the language context, and they need to interact and communicate with others in real life. In the case of immigrant students, they invest in learning a language which is necessary for social interaction and integration into a community outside of the classroom (Juexuan et al., 2020). It is worth mentioning that these learners want to be part of the community where they live and learn the culture (Carlioni & Sisti, 2019; Darvin & Norton, 2021). This reason explains the need regarding investment of this group of language learners. As they want to be included in society, they engage in language interaction.

A second group of learners are those who are not immersed in the second language context; however, they are required by their education programs to learn it. Within this group, the first subgroup we can mention, those who are going to be language teachers have received a lot of attention (Kim, 2014; Kavrayici, 2020; Tan et al., 2017; Turgut, 2021). Additionally, investment has been explored mostly among them because for this group of students, English as a foreign language (EFL) learning results particularly important (Archanjo et al., 2019; Flores et al., 2020). As stated by Yesilcinar (2021), mastering the language is an obvious necessity related to language teachers' professional life. This author agrees that the foreign language is necessary to communicate with peers and to teach their learners and this fact is the driving force to succeed in language learning.

There is a second subgroup of students of other professions unrelated to language education that are being compelled to learn English in their professional programs in higher education. In this case, the opinions of the students would result interesting and the level of investment they show as well (Teng, 2019). Previous literature has explored what people of different professions think about EFL learning (Diep & Hieu, 2021). It is possible to identify for instance, those that attach a high value to English such as engineers, scientist, and others. They recognize the necessity in their education related to their profession to communicate with colleagues, for business or research, so this group of learners is convinced to invest in language learning (Diep & Hieu, 2021; Lacka-Badura,

2021). Nonetheless, language learning investment can be seen as an add-on qualification to increase job opportunities that present comparative advantages in the job market. Moreover, language learning investment enhance the students' chances when they have this additional value to their degree (Amorati, 2018; Diep et al., 2021; Vu et al., 2021). Nevertheless, there can be another sector where even though the necessities of learning a second language can be identified, they are not enough to promote high engagement and agency to learn. All these different perceptions bring concern regarding the decision of investing or not in EFL learning. Necessity is a determinant factor to invest, and it is therefore interesting to know what the attitudes and level of investment shown by higher education students are. To this end, it is necessary to make it clear that investment in learning is not the same as motivation or attitudes. For this study, investment in learning is considered everything done by the learner that makes evident their interest in learning something. Investment is related to commitment and, consequently, to the achievement of some benefit. It is comprehensible that to take action, individuals base their decisions on personal beliefs and appreciations. The evaluation of a situation together with the necessities and expectations, influence the final attitudes that the person shows towards a particular situation. Finally, the positive or negative attitudes define or maintain the individual's motivation to do something.

### **1.2.3 Higher Education Students and Curricular Changes**

Interactions with people, knowledge, language, culture, and other social elements are demanded for each role a person plays (Lutovac, 2020; Tan et al., 2017). At this moment, language learning educational policies and curricular changes in Mexico, have required everyone to learn English ideally in all educational levels (Izquierdo et al., 2017, Izquierdo et al., 2021), but specially in higher education. These policies aim to equip students with the linguistics skills that they need to join the productive forces of a country upon the completion of their university studies (Shapiro et al., 2007). In the case of undergraduate students, irrespective of their future profession, compulsory language learning may imply that students need to satisfy English language learning requirements, such as language attainment levels, compulsory language courses and sometimes standardized language tests (Arias et al., 2015; Diep et al., 2021).

In the higher education context, it then becomes important to examine the learning investment of students as they meet the English language curricular demands. To date, a handful of qualitative studies have explored this issue through individual cases in different contexts (Teng, 2019; Tülüce, 2018; Yang et al., 2021). As indicated in the upcoming sections, these studies provide some valuable evidence on the factors that underpin language learning investment. However, they are limited in terms of the representativeness and generalizability of the results in higher education (Teng, 2019), which includes large and diverse populations of future professionals.

According to Tan et al. (2017), commitment to be competent and authentic in what is being done is crucial to develop professional identity, something that occurs throughout the professional life. When individuals feel motivated, identified, and confident with what they are doing, it makes sense for them to do it. The individuals value themselves, the role they play, and even future interactions that might take place among them (Hahl & Mikulec, 2018; Kavrayici, 2020; Tan et al., 2017). Motivation might encourage the individual to invest and become an agent of his or her own professional development. In the end, professional identity should be considered extremely important because it is developed through learning in an ongoing process (Beijaard et al., 2004; Hahl & Mikulec, 2018; Norton, 2013; Norton, 2019; Norton et al., 2020).

In this vein, diverse authors agree that teacher training is the cornerstone of the educational system and there are some facts and actions that may have implications in the educational process of training teachers which will contribute to constructing their professional identity. Additionally, it is significant how the teachers see themselves and the role they assume as teachers, because everything is related to commitment (Cheung, 2008; Golzar, 2020; Hahl & Mikulec, 2018). It is important to consider that teachers in training have their baggage of experiences and beliefs, which will foster commitment (Alsup, 2008; Hahl & Mikulec, 2018; Hai et al., 2018). In general, the interaction with other professionals helps to shape the professional identity (Beijaard et al., 2004; Casas, 2020; Levison et al., 2013).

One interesting perspective to explore would be from the side of the teacher who must learn a foreign language as part of educational reforms. What attitudes and

investment are mediating the process? Thus, it is found that teachers often participate in school management processes for students or for personal development. These actions, favor their position as agents in the educational process, promoting innovative practices (De Costa & Norton, 2017). Teachers' mission is the core of a structure that is affected by the educational policies of every country and must change to adapt to the educational reforms that have an impact on the teachers' community (Aristizábal, 2019).

### **1.3 Identification of the Research Gap**

Contributing to knowledge is of paramount importance when planning new research. It is necessary to identify gaps in order to design studies that shed new light and help to find solutions. It is useful to remember that the good or poor statement of the problem affects the report of the findings and the conclusions of the research (Scates & Hoban, 1937). Educational reforms in Mexico, affect language learning at all educational levels, including not only higher education for all the students no matter the area of studies, but also in teacher training schools. Based on previous research the following problem was identified:

1. National reforms in Mexico are sanctioning EFL education in the public curriculum from pre-school to higher education.
2. In the case of higher education, EFL education is required in university programs, despite the professional and disciplinary orientation of the students.
3. Previous research has mostly examined EFL attitudes and investment that result from the compulsory EFL education among professionals who are related to EFL teaching (e.g., pre-service, and in-service language teachers)

#### **1.3.1 Objectives**

Based on the literature review, the present study considered the following objectives for the research design:

1. To analyze the attitudes towards and investment in compulsory EFL learning among higher education students from programs which are not related to the EFL profession.

2. To examine whether the attitudes the students have towards compulsory EFL learning have an impact on the level of EFL learning investment among higher education students from programs which are not related to the EFL profession.

3. To describe factors that underpin EFL learning attitudes and investment among higher education students from programs which are not related to the EFL profession.

### **1.3.2 Research Questions**

Derived from the objectives, the next research questions emerged (Cohen, 2018):

RQ1: What is the impact of compulsory EFL education on the type of language learning attitudes and level of language learning investment among higher education students from programs which are not related to the EFL profession?

RQ2: What factors underpin the relationship between students' attitudes towards compulsory EFL learning and language learning investment among higher education students from programs which are not related to the EFL profession?

This study intends to examine the attitudes to know what is happening in the particular situation of this group of students to identify the existence of several factors that could affect language learning investment.

#### **1.3.2.1 Relevance of Investment in EFL Learning.**

Language learning investment has been explored among students in different contexts (Carlioni, 2019; Harrison et al., 2013). Researchers have tried to know how students respond to new policies (Tülüce, 2018), how students invest in the opportunities they have (Diep et al., 2021), and which factors improve the opportunities for students (Diep & Hieu, 2021). Now that English language learning is sanctioned and students must comply with EFL courses at all levels, it is important to explore whether the same factors influence all students in higher education whose professional life is not going to be related to language learning.

In the existing literature, research has been conducted from a qualitative point of view (Darvin & Norton, 2021) and it has been mostly related to pre-service and in-service

language teachers. For instance, studies have been carried out with language learners (Tamimi'Sa'D, 2017), other teachers (Hahl & Mikulec al., 2018; Hai et al., 2018) and pre-service teachers of English (Archanjo et al., 2019; Flores et al., 2020). Most of the research was conducted in the general field of education to explore the level of investment in general (Mora et al., 2016), and there are a lot of studies that work with identity and investment in language learning. There are also studies that have looked at investment as a secondary component of teacher identity, where language learning investment has not been the central component (Hidarto et al., 2021). Nevertheless, as it was previously indicated, educational systems are now making everyone learn the language. Within this context of higher education students who are compelled to become EFL learners, it results of interest to know if they show language learning investment as pre-service language teachers do in previous research.

Therefore, it is necessary to see if the results can be extrapolated to other groups of participants and contexts (Cohen, 2018). Likewise, there are other professions that are not going to be related to English at all and are also compelled to study English to comply with the curricular demands. So, this case is representative of students that are required to learn English, even though they might feel that this foreign language is not a necessity in their profession.

However, the aforementioned studies explored the level of investment that the students from specific contexts, put on language learning. From the quantitative point of view, to validate the results and make them generalizable, other populations need to be considered. It is necessary to look to other contexts to see if the level of investment shown by the studied populations is also representative in different contexts and populations (Cohen, 2018). Furthermore, previous research in different countries has explored different dimensions such as beliefs (Turgut, 2021), experiences and commitment (Hahl & Mikulec, 2018). However, other dimensions of learning investment such as attitudes, necessities, engagement, and agency deserve further exploration.

In relation to the findings of some previous studies with qualitative approach, they provide evidence of individual cases. The latter substantiates the necessity to obtain more representative and generalizable results. Here the relevance of considering the use of

large samples or the inclusion of participants from different contexts. Quantitative research that explores the different factors that contribute to language learning investment is valuable because identifying the factors allows to systematize the exploration of the different dimensions in different contexts. A quantitative instrument allows for the systematic exploration of the variables across the participants (Cohen et al., 2018; Dörnyei, 2007) because individual answers obtained in qualitative studies could not be systematized, as it is necessary to keep the variables constant across all the study. To fill this gap, the question that emerges is if students from different contexts exhibit different language learning investment patterns with respect to English language learning. Identifying the factors that contribute to language learning investment give the opportunity to explore if the results are context-dependent or they are generalizable to different populations. Having a valid and reliable quantitative instrument would allow to explore language learning investment in multiple areas of studies.

## Chapter 2: Methodology

In the following sections the methods used to carry out the study are described. First, the characteristics of the selected research design and its phases. Second, the hypotheses and the assumption are stated. Third, the description of the population and context are given for the quantitative and qualitative phases of the study. Next, the sampling procedures are explained for both phases as well. Then, the theoretical, methodological, and operational principles followed for the design of the instruments are given in the following order: first the survey, then the attitudes Likert-scale questionnaire and the investment Likert-scale questionnaire and last, the semi-structured interview.

### 2.1 Research Approach

The present study relies on a mixed methods study (Cohen et al., 2018; Creswell, 2018). The purpose is to collect quantitative and qualitative data to have a better understanding of the problem. Using a combination of methods to collect data reduces the weaknesses and allows to increase reliability of data (Cohen et al., 2018; Lodico, et al., 2006). While it addresses the correlation and focusses on variables, it allows to understand situations as they are seen and described by the participants. As explained by Creswell and Plano (2018), different typologies of mixed methods have been proposed by different authors. They were developed based on timing, what creates a sequence of procedures; the purpose of the study; or the level of interaction determining if the methods are fully integrated or there are different components. The typologies can represent the disciplines or the way of thinking regarding the methods. In the end, after various changes over the years, three core designs were presented by Creswell and Plano (2018): explanatory sequential, exploratory sequential and convergent designs. Using a mixed method study requires to decide the kind of data that are needed; how will they be collected; the sample to be used; and how to analyze, interpret and report the data. It must not be forgotten that validity and reliability are of utmost importance to draw research conclusions. As explained by Cohen et al. (2018) using two kinds of data increase reliability/dependability in terms of credibility of the results, replicability, internal consistency, credibility, and others (Creswell, 2014; Teddlie & Tashakkori, 2009).



Additionally, the same authors state that validity is increased if there is design rigor, consistency of findings and conclusions in line with the evidence.

### **2.1.1 Research Design**

There are different ways to approach quantitative research, as stated by Walker (2005), it can be: descriptive, correlational, and causal. This correlational study examines the relationship between two variables. Based on previous research (Artamonova, 2020; Diep & Hieu, 2021; Teng, 2019) a link between attitudes towards learning and investment in language learning was identified. It is of interest to determine whether the investment shown in other studies with different groups of participants, (Archanjo et al., 2019; Flores et al., 2020; Mora et al., 2016; Tülüce, 2018) is the same with EFL learners in Mexico. While there is not an intervention included in this study's methodology, we can test a hypothesis by using the appropriate instruments to collect data and by carrying out the necessary analyses. In this case there is no possibility of random sampling or manipulation of any characteristic. Nevertheless, the weaknesses can be balanced out with a mixed methods approach and the use of quantitative instruments that help to standardize the data collection procedures and contribute to the strength of the study. As Creswell (2014) states, there are three basic mixed methods designs: a) convergent parallel mixed methods where the quantitative and qualitative data collection occurs simultaneously, are analyzed separately and compared; b) explanatory sequential mixed methods where quantitative sampling and data collection take place first followed by purposeful sampling and qualitative data collection that help to explain in detail the quantitative results; c) exploratory mixed methods that begin with qualitative data collection and analysis to use the findings to develop instruments to collect data that help to generalize results. Based on these designs, for the present study an explanatory sequential design was selected to collect data to find the answer to the research questions.

### **2.1.2 Explanatory Sequential Design**

In an explanatory sequential design, it is common to collect quantitative data first, followed by the qualitative data collection. This sequence helps to explain the quantitative findings (Cohen et al., 2018; Creswell & Plano, 2018; Schoonenboom & Johnson, 2017;

Yin, 2009). At the end researchers can use all the collected information and get to conclusions. The purpose is to have qualitative data to explain quantitative findings in more detail. On the one hand, it is common to use first a survey to collect information that helps to identify or describe the characteristics of the participants. On the other hand, scale questionnaires can be used to obtain information about their opinions and perceptions. The qualitative phase comes after, to expand and explain the results from the first phase (Kavrayici, 2020). Based on the answers to the quantitative instruments, interviews can be designed to collect information that allow the participants to expand, explain or clarify their previous answers. In the end, the researcher can collect data with different instruments and have the opportunity to better understand the situation.

Based on Creswell and Plano's (2018) core designs, this explanatory sequential mixed methods study was implemented in two phases:

- Quantitative phase: explanatory study to,
  1. identify the type of attitudes towards and the level of investment in compulsory EFL learning among higher education students from programs which are not related to the EFL profession.
  2. test whether there is a correlation between attitudes the students have towards compulsory EFL learning and the level of EFL learning investment among higher education students from programs which are not related to the EFL profession.
- Qualitative phase: multiple case study to,
  1. identify factors which explain the relationship between students' attitudes and EFL learning investment among higher education students from programs which are not related to the EFL profession.

Data analysis of quantitative and qualitative phases can be done separately in mixed methods designs. Cohen et al. (2018) recommend working in the analysis and writing of the first phase and then continue with the second and combine everything to analyze it together. A specific group of participants, of higher education, which comply

with some determined criteria were called in to participate during their first year of studies to identify their level of language learning investment.

### **2.1.3 Hypothesis and Assumption**

#### **2.1.3.1 Hypotheses for the Quantitative Phase.**

To operationalize the research questions, directional hypotheses are presented to test if there is a correlation between the variables, (Cohen et al., 2018).

H:1 Compulsory EFL education has an impact on the type of language learning attitudes and level of language learning investment among higher education students from programs which are not related to the EFL profession.

H:2 The type of attitudes the students have towards compulsory EFL learning, influence the level of EFL learning investment among higher education students from programs which are not related to the EFL profession.

#### **2.1.3.2 Assumption for the Qualitative Phase.**

A:1 Different factors, such as those which have been acknowledged in previous research, may underpin the relationship between students' attitudes and EFL learning investment among higher education students from programs which are not related to the EFL profession.

### **2.1.4 Quantitative Phase: Aim**

The quantitative phase of this study aims to identify the types of attitudes and level of investment in EFL learning in a group of higher education learners and to test whether there is a correlation between the attitudes and the level of language learning investment the students show.

#### **2.1.4.1 Research Design.**

The present doctoral study implemented an explanatory sequential design. The first phase included the design of instruments to collect quantifiable data that would be integrated with the data obtained in the second phase (Creswell & Plano, 2018). Therefore, the quantitative component was the first phase. The subsequent qualitative phase had the purpose of obtaining in-depth explanations that help to reflect and

understand how qualitative data help to explain the results obtained from the quantitative instruments (scale questionnaires).

#### **2.1.4.2 Variables.**

Lodico (2006) explains that variables are “the attributes, qualities or characteristics of persons, groups, settings or institutions” (p. 7) which become variables when they can be measured. According to Cohen et al., (2018), variables are the operationalization of constructs that the researcher wants to explore, and a precise observation of a variable can be considered a measurement (Gravetter et al., 2021). In turn, the present study addresses two variables. The independent variable is not affected by any and it corresponds to the attitudes of higher education students towards compulsory language learning, as mandated by new educational policies that entailed changes in the curriculum. The dependent variable is the one that to some extent is influenced by one or more variables (Hoy et al., 2015). The dependent variable identified in the research question is the language learning investment shown by this group of higher education EFL learners.

In the context of the current study, these variables take a quantitative nature. Both variables are measured using ordinal scales because they are measured through the appreciations of the participants (Gravetter et al., 2021). The measurement of the variables makes evident the need of assigning categories with limits. The limits could be precise like in the case of continuous variables using numbers, or they can be categories using names. The categories are used to identify a scale of measurement. This kind of scale, as mentioned by Gravetter et al. (2020), is used when difficulties are found while numerical scores are assigned to the measurements, for instance, as it happens with preferences. The attitudes towards compulsory language learning mandated by new educational policies show a correlation with the dependent variable (Cohen et al., 2018; Hoy et al., 2015). Moderating variables are not included because it is not considered that other variables change the relationship between the independent and a dependent variable (Cohen et al., 2018; Hoy et al., 2015; Rogers & Révész, 2020).

There are some variables that may intervene in the relationship between the independent and dependent variables. Some qualitative findings in literature have

provided evidence that the variables attitudes and investment in learning might be related (Artamonova, 2020; Chen et al., 2022; Kim, 2014). In that case, what has been shown in studies in qualitative research might be proven through quantitative research. Attitudes towards learning a second language and language learning investment may be influenced by mediating variables. It is of interest to investigate which are the factors that might be enhancing or mitigating the relationship between the attitudes and language investment. To clarify the point, it is said that the mediating variables are not affecting directly attitudes or learning investment, but they might affect the possible relationship between the independent and dependent variables.

Factors such as emotions, beliefs, necessities, engagement, and agency can modify the outcomes of learning investment shown by the students. It might be possible to identify mediated relations among the factors and attitudes or the construct of investment. For instance, level of investment and engagement, level of investment and emotions or needs, investment and agency, so it might be possible to identify if different factors contribute to language investment more than others (Cohen et al., 2018; Hoy et al., 2015). The sequential design provides the elements to explain a straightforward relationship between attitudes towards compulsory language learning and language learning investment. Therefore, the qualitative component of the design will result useful to understand the mentioned relationship.

### **2.1.5 Qualitative Phase: Aim**

For the qualitative phase, the aim was to identify the factors that helped to explain the relationship between the attitudes and the language learning investment. Although, several factors have already been found in previous studies (Chen et al., 2022; Hahl & Mikulec, 2018; Turgut, 2021) it was necessary to corroborate the existence of the correlation between them.

#### **2.1.5.1 Research Design.**

As previously explained in the explanatory sequential design, the qualitative phase followed the quantitative one to obtain data that allow the researcher to reflect and find an explanation of the quantitative results. Creswell and Plano (2018) explain that this kind of design results convenient when there are limited resources such as a sole researcher.

Because of that, results coherent that data collection is limited to one instrument at a time. In relation to the qualitative phase, it is linked to the quantitative results because the qualitative instrument was derived from the results obtained in the first phase (Creswell & Plano, 2018). In the end, all the results are interpreted to explain the correlation between the dimensions of language learning investment.

In this explanatory sequential design, for the qualitative phase, a case study method was selected. Creswell (2013) indicates that questionnaires, interviews and observations can be used to collect data. The same author (2018) explains that in sequential designs one phase builds on the other, having this way one phase with substantial data collection and another phase that follows-up with data that are needed for further explanation. In the present study, an explanatory multiple case study was conducted, and the results helped to explain the quantitative results (Creswell, 2018; Kavrayici, 2020; Yin, 2014).

#### **2.1.5.2 Dimensions.**

The goal of the qualitative phase of the study is to identify the factors or dimensions that explain the relationship between learners' attitudes and language learning investment. As mentioned before some dimensions have been explored in previous research, however, not all of them have received the same attention. For this study, the dimensions were selected in advance to examine the relationship between attitudes and learning investment and corroborate their correlation. Hence, the implementation of case studies is useful for further exploration and allows a researcher to make comparisons between dimensions of the same construct and between constructs (Creswell, 2018).

### **2.2 Population**

Regarding the population that was considered to carry out the study, explicit criteria for the selection of the participants were needed, as explained by Walker (2005). Additionally, randomization to distribute participants when there is more than one group is the best procedure to assure a representative sample that helps generalize the findings. Furthermore, some previous studies related to language learning have examined different groups of language learners (Diep & Hieu, 2021), for instance, engineers, business

students, in-service teachers, and senior pre-service language teachers as mentioned in previous sections.

### **2.2.1 Sample and Context**

The present study evaluates higher education students who do not relate their professional studies to language learning. In Mexico, there are different kinds of private and public teacher training schools. Among them, there are National Pedagogical Universities, Institutes of Higher Education and public teacher training schools called “Normales”. Then at the national level there are 263 public teacher training schools and 183 are private (Secretaría de Educación Pública [SEP], 2018). The public teacher training schools are specialized in different areas: pre-school education, elementary education, physical education, and special education.

The present work was carried out at a special education teacher training school in the southeast of Mexico that offers the Bachelor in Inclusive Education. The degree takes four years to be completed. The participants were higher education students enrolled at a public teacher training school. Previous research has been carried out with language learners that are at the end of their professional studies (Archanjo et al., 2019; Hahl & Mikulec, 2018; Turgut, 2021). In this case, the participants were at the beginning of their professional studies enrolled in the first semester. This group of students was compelled to take EFL classes during the first three semesters of the program. The aim of the curriculum is that the teachers in training achieve C1 level according to the Common European Framework of Reference for Languages (CEFR) (SEP, 2017). It is necessary to emphasize that they will not be language teachers.

In February 2021, school enrollment was 283 students (Escuela Normal de Educación Especial Graciela Pintado de Madrazo, 2021). Each year the school receives from 70 to 100 new students from all the municipalities of the state for the Bachelor in Inclusive Education. The whole population of the school is between 280 and 300 students. The staff includes 25 teacher trainers, including two English teachers, to cover all the subjects in the curriculum of the Bachelor of Inclusive Education (see Table 2.1).

**Table 2.1***Staff and Students Enrolled in the School*

Teacher training school staff		Students	
Administrative workers	14	First semester	75
Teachers	25	Third semester	83
		Fifth semester	69
		Seventh semester	56
Total	39	Total of students	283

Source: School Administration, October 2021.

**2.2.2 Quantitative Phase Participants****2.2.2.1 Participants.**

Based on this kind of population, all the students enrolled on the first semester were selected to participate. Most were between 18 and 25 years old, with some exceptions. Most of them had finished their middle school in public schools and had basic level of English. All of them were compelled to pass three English courses in the curriculum.

**2.2.2.2 Quantitative Sampling Procedure.**

Cohen et al. (2018) indicate that the sample must represent the population, the amount, and the heterogeneity of the participants. Not only does the size of the sample matter, but so does the homogeneity of the population. A more homogenous population allows for the use of a smaller sample. Other authors say that determining the size of population is also related to the kind of research being conducted. Cohen et al. (2018) explain that if a study is correlational, the sample should be no less than thirty participants. The kind of variables comes into play when calculating the sample size. The same authors affirm that “categorical variables need larger samples” than continuous data do (p. 207). Furthermore, these authors claim that if the nature of the scales is considered, “for nominal data the sample has to be larger than for interval and ratio data” (p. 208).



For the present study a non-probability sample method was used (Cohen et al., 2018). Thus, a convenience sampling procedure was selected. First, because the purpose was to represent a particular group and this was the population the researcher had access to, what made the process less complicated. Second, it was a group of higher education students that complied with the characteristic of being affected by EFL learning changes in the curriculum even though they do not relate their profession to language learning. Third, due to the limited number of students enrolled each course, the sample was homogeneous which made it representative of the institution's population. Another point to mention in line with the kind of study, is that the sample was bigger than the minimum for a correlational study mentioned by Cohen et al. (2018). Regarding categorical data, they need larger samples, nevertheless if we consider the arithmetical properties of the variables, ordinal scales with assigned numerical values allow the researcher to run different statistic tests.

#### **2.2.2.3 Quantitative Sampling Error.**

When the sample does not represent the population an error in the sampling procedure is considered (Cohen et al., 2018). The sampling error is the difference between the sample and the means of the population. The same authors affirm that the error depends on the heterogeneity of the population measured as standard deviation. It is important to mention that when the size of the sample increases, the error decreases. Mortality is another setback that researchers must face when participants drop out of the study (Walker, 2005) so it might be a good idea to use a bigger sample than required (Cohen et al., 2018 p. 208). The way measurements are taken can also affect reliability and validity, so if the conditions or circumstances during the process are not adequate when the instruments are applied, the results are affected or distorted (Walker, 2005).

In relation to ethical issues, it must not be forgotten that confidentiality and anonymity are basic and that the principles of non-maleficence (no harm) and the promotion of beneficence must be respected for the integrity of the research (Cohen et al., 2018). There must be a good relationship, rapport, and trust, between the researcher and the participants that show confidence and assure no harm to them or the institution where they belong to (Cohen et al., 2018). Therefore, a letter of ethical consent from the

institution was obtained. The participants were informed of the research purpose and details about it, confidentiality and anonymity were assured, their right of leaving the moment they decided was explained and they were asked to sign a letter of consent to participate.

### **2.2.3 Qualitative Phase**

#### **2.2.3.1 Participants.**

The selection for the qualitative phase was based on numerical data obtained from statistical analysis of the results of the attitudes and investment questionnaires. Students were called to participate in an interview. According to Lodico (2006) it can be a group or individual case study to gather information about their attitudes, experiences, and opinions.

#### **2.2.3.2 Qualitative Selection of Participants Procedure.**

Non-probability sampling is the common method used by qualitative research (Cohen et al., 2018). These authors explain that in qualitative research purposive sampling helps to achieve representativeness because it focusses on specific characteristics of a group that are related to the needs of the study, and it allows to compare accumulated data. However, it does not pretend to represent a wider population. To assure representativeness or comparability, Teddlie and Tashakkori (2009) and Flick (2009) presented a typology for purposive sampling in qualitative research. The typology includes typical case sampling, extreme or deviant case sampling, intensity sampling of a particular group, maximum variation sampling, homogeneous sampling, reputational case sampling, and criterion sampling. For this mixed methods explanatory sequential design, the qualitative sample was obtained from the original sample based on the results of the quantitative instruments. As a result, extreme case sampling was chosen for the qualitative sample of this study. Additionally, the inclusion/exclusion criteria were determined depending on the numerical data from the quantitative instruments because participants with extreme positive or negative attitudes towards compulsory EFL learning and investment were selected to participate in the interviews. This means, one group with positive attitudes and high level of investment and a second group with negative attitudes and low level of investment.

### **2.2.3.3 Qualitative Sampling Error.**

As mentioned in a previous section, mortality is again a problem to tackle in this phase. That is why participants were called only once to participate in an interview to clarify and expand the information given in the questionnaires. A set of questions was prepared to guide the interview and obtain the same information from all the participants. Identifying extreme cases would help to explore and compare qualitative data with numerical data from the questionnaires (Cohen et al. 2018). As the sample is small, findings are not generalizable to the population, but they can be transferred or generalized to other similar populations or situations, and this contributes to ecological validity. Replicability can apply in terms of participants, social context, instruments and data collection methods and analysis. Reliability lies on authenticity, detail, honesty, and depth of response of the participants (Cohen et al., 2018). Ethical issues are the same as for the quantitative research. The principle of non-maleficence, anonymity, confidentiality, trust, and ethical procedures must be complied.

Thematic analysis was used to analyze data obtained through interviews. First, everything was read several times to understand ideas, highlight main ideas or events mentioned by the participants and to make notes to help group the information together. In a next step, patterns were identified and coded. Finally, the codes were classified under themes. To achieve internal validity, data were compared (questionnaires and interviews) to identify congruence or similarities in the findings.

## **2.3 Instruments**

### **2.3.1 Survey**

#### **2.3.1.1 Theoretical Aspects.**

To collect information of a group of higher education students (pre-service teachers) who will not be language teachers, three instruments were used: 1) a survey, 2) an attitudes scale questionnaire and 3) an investment scale questionnaire. The first instrument was a survey to obtain sociodemographic information (see Appendix A1). Correlational research, which is non-experimental, is a quantitative method used to show the relationship between two or more variables that are not manipulated. The relationship

between the variables is determined through statistical analysis and reported numerically, with what is called a correlation coefficient. As in descriptive research, for explanatory research a survey can be the tool. Cohen et al. (2018) state that a survey collects factual information that is not under the researcher's control, nevertheless, it is necessary to know about the participants to understand the conditions of the population (Johnson, 1959).

A survey collects generalizable empirical data using close-ended questions that allow to measure and describe the variables (see Table A1). It is necessary to have the knowledge, plan, and design of the survey; it is not only a matter of putting questions together. Thus, as described by Cohen et al., (2018), it must have an introductory section to explain the purpose, give instructions, assure anonymity, and give contact information. Then a sociodemographic section allows to collect detailed information about the participant. Finally, the third section is the body of the survey. This kind of instrument generates numerical data that can be collected on a one-shot basis and help to standardize information to be processed. The data can be used to find correlations, to generalize, and to identify patterns or relationships (Cohen et al., 2018).

For quantitative research, generalizability and representativeness are important. This makes the sampling method an important part of the process. Probability sampling is preferable; however, non-probability sampling can be used. This is the case of a sample that is restricted by convenience as described by Cohen et al. (2018). This fact impacts reliability, but the sample that represents the populations' characteristics might be handy and can show less variability among the participants. When surveys are used, as mentioned before with non-probability sampling and on small-scale basis, generalizability is affected (Cohen et al., 2018). However, as explained by Lodico (2006) and Cohen et al. (2018), a one-shot survey design may be used to collect sociodemographic information.

### **2.3.1.2 Methodological Aspects.**

As mentioned above, a survey uses close-ended questions, such as multiple choice or yes-no questions. It is important to keep the questions short and with clear wording to avoid misunderstandings. When designing the survey, an ordered and sequenced format with clear instructions and sections must be considered because if it

demands too much time and effort, it can lead to non-response from the participants (Glover & Bush, 2005), these are errors that can be avoided. The instrument for this study has four sections: 1. Introduction where general information, the objective and instructions are given. There is also information related to ethical procedures about confidentiality, anonymity, and contact information; 2. Sociodemographic information questions to understand the characteristics and conditions of the sample; 3. Previous experience regarding English learning to obtain factual information about their personal experience; and 4. Reasons to learn English to collect more facts related to the usefulness of the language. At the end, a thank you note can be found.

### **2.3.1.3 Validity and Reliability.**

Validity is a concept that implies the relationship of several elements and determines the point up to which interpretation of data is explained by evidence (Cohen et al., 2018). It warrants the connection between data and conclusions. Depending on the kind of instrument it could be said that it shows “how well the instrument measures what it says it measures” (Boyle & Fisher, 2007 p. 59). There are different types of validity: external or internal. The second can be divided into face, ecological, content, construct, and criterion validity.

External validity is related to generalizability what implies working with a representative sample. In this case, the sample should be representative of the population of higher education students. However, this study worked with a specific group of individuals that were available and this might represent a weakness. This problem could be tackled if the instrument can be given to students of different bachelors to determine if the findings can be generalized, this way representativeness of higher education students could be also addressed (Cohen et al, 2018). Other types of validity were addressed to reassure it. Regarding internal validity, for the present instrument, content and ecological validity were addressed. Experts were asked to participate to determine that the instrument represented what was intended to measure and demonstrate content validity. A threat to internal validity in the case of this one-year study was mortality or attrition (Cohen et al., 2018), because the loss of participants could affect the results. Ecological validation took place using groups of students from other semesters to check if the

characteristics of both settings were the same (Cohen et al., 2018). Regarding the experts, a strength was that they were experts in second language learning that could participate to validate the instrument, but on the other hand, there might be a weakness if they were not experts in the context of public schools or the kind of population.

Reliability is related to the construct that is being explored to know how accurate the instrument is and how consistent over time it can be (Boyle & Fisher, 2007). If the items are related to the same topic, a correlation among them can be found. There are different types of reliability: stability, that measures the consistency along time can use a test-retest; equivalence, obtained using equivalent or parallel forms (equivalent versions of the instrument) or with inter-rater reliability; and internal consistency (Cohen et al., 2018) using the split-half method or the Cronbach Alpha, that is a coefficient of inter-item correlation to see that the items measure the same construct.

In terms of reliability, for the survey used in this study to obtain sociodemographic information, not all the techniques can be used, but using some of them would be enough because this is not the central instrument of the study. Inter-rater reliability could not be reached because there was only one researcher, but training could ensure consistency. For stability, a procedure similar to a test-retest technique, can be used to show consistency of the answers using a validation group. They could be given the survey twice and then the answers could be evaluated for consistency along time. To address precision, a group of experts can rank the items according to the importance they think they have to reduce the number of items if necessary, and the conditions of data collection could be controlled to minimize sources of variation. The students called to participate in the validation process, gave their opinion about the length of the instrument and unnecessary questions. They had the same profile as the participants of the study and have already finished the language learning period so they should be more aware of the process.

### **2.3.2 Scale Questionnaire: Attitudes**

The second data collection instrument was a scale questionnaire to collect data regarding learners' attitudes towards language learning (see Appendix A2). As mentioned in a previous section, when there is a possibility of operationalizing and measuring the

constructs that the researcher wants to explore, they become the variables of the study (Cohen et al., 2018; Lodico et al, 2006). The precise observation of the variable using controlled procedures is considered its measurement (Gravetter et al., 2021). The independent variable of this study is the attitude of higher education students towards compulsory language learning. This variable takes a quantitative nature, and it was decided, based on the statistical review, that using an ordinal scale would be appropriate. Data to be collected are subjective, related to opinions or attitudes, what makes suitable the use of a scale questionnaire.

Attitudes, as described by different authors are evaluative orientations or beliefs. Gardner (1985) describes them as an evaluative orientation talking based on beliefs about a social object. Furthermore, Artamonova (2020) states they are “evaluative beliefs and feelings that predispose behavior” (p. 811). For this study, language learning attitudes are product of the evaluation of different learning aspects or situations that are related to the learning process, people, or culture. To collect quantitative data for the present study, it was decided to use a scale questionnaire due to the characteristics of the independent variable. Theoretical and methodological principles of quantitative research were considered for the adaptation of two instruments that have been already validated in different contexts. Nevertheless, validity and reliability procedures were carried out for the new adapted version for higher education EFL learners. The following sections describe the theoretical and methodological aspects related to the use of scale questionnaires.

### **2.3.2.1 Theoretical Aspects.**

Scale questionnaires help researchers to understand social realities. They allow to collect quantifiable data about opinions, attitudes, behavior, and perceptions. To this end, the research participants are presented with a prompt in the form of a statement. Then the participants react by selecting a value in a scale (Dörnyei & Taguchi, 2010). Through the scale, the researchers can work with subjective data and establish different degrees of measurement for opinions, attitudes, behaviors, and perceptions (Fabila et al., 2013). Each degree is given a numerical value which can be analyzed and possibly generalized. Based on these characteristics of scale questionnaires, it is possible to collect numerical data to examine attitudes towards EFL learning among higher education students.

It should be noted though that scale questionnaires demand complex cognitive processes from the respondents. Therefore, before designing the questionnaire, it is extremely important for the researcher to be clear about the concept, construct, or variables which are going to be explored (Fabila et al., 2013). Thereafter, its construction must be carefully conceptualized building upon pertinent theoretical principles. Based on the classical measurement theory, three central principles for the design of the questionnaire are unidimensionality, univocality, and proper statistical analysis (Hodge & Gillespie, 2007). The first principle, unidimensionality, implies that each item refers to a single dimension. The second principle, univocality, demands that every questionnaire item represents a single stimulus, and carries a semantic direction which is consistent with the other questionnaire items. The third principle is related to the robustness of statistical criteria that cope with the analysis of ordinal data.

In addition to the clear conceptualization of the items following the principles of unidimensionality and univocality, another aspect that requires attention is the scale that is going to be used for the participants to express their opinions. This implies the use of a set of gradually interrelated answer options which go from a positive to a negative stand. In relation to the number of options, an agreement has not been reached. While some authors indicate that among the answer choices the participants should be given the opportunity to remain neutral, others indicate that this opportunity should not be provided; if the neutral point in the options is omitted, then the participant is forced to take a position with respect to the stimulus that is presented (Cohen et al., 2018; Hernández & Izquierdo, 2020; Hodge & Gillespie, 2007). Having no neutral point may have collateral effects on the responses when the scale is administered more than once. When the neutral point is eliminated, the participants demonstrate sensitivity by not using extreme responses. Therefore, most of the responses are middle-range directional responses to compensate the missing point, or there is no response at all (Guy et al., 1977).

Once the scale has been established, the researcher assigns a numerical value to the answer choices; the values are assigned following a continuum, where the extreme negative answer holds the lowest value, and the extreme positive answer choice holds the highest. The numerical values assigned to the options allow the data to be treated



numerically. There are different opinions about the numerical nature of the scale values. Ordinal scales do not guarantee equal intervals of measurement, while interval scales work with equal intervals. Some people consider that the values are ordinal and should be treated as non-numerical because even if it is possible to determine the direction of the difference between measurements, it is not possible to determine the size of the difference (Gravetter et al., 2021); this means there is not an “equal-sized gradation between the points” (Cohen et al., 2018, p. 481). Some other people consider the scale could be treated as interval because of the numerical properties it has when values are assigned to the answer options. As explained by Larson-Hall (2016), it depends on the kind of variable, categorical or continuous and the way the researcher decides to manage it. For instance, when working with language learning, there can be levels which do not represent a numerical value, or the level of anxiety of language learners can be measured with a Likert scale to obtain scores.

When the numerical values across the questionnaire items are added up, a general score is obtained and becomes representative of the opinion, perception or attitude that is being measured (Fabila et al., 2013). This procedure gives the scale an additive property. The numeric and additive properties of the scale give the opportunity to treat the participant responses as an interval scale because the points can be added (Fabila et al., 2013). In this regard, Norman (2010) and Hodge and Gillespie (2007) state that parametric statistics can be used to analyze data because of their robustness. Moreover, Norman (2010) puts forward three arguments with respect of the numerical measurement of the data. First, the author explains that even if the items might be ordinal, the sum of the points turn it into an interval after the addition. A second argument is that when numerical data are used in the analysis, conclusions and inferences can be made. The third argument is related to the correlation of individual data and Norman (2010) states that Pearson coefficient, ANOVA and other test of central tendency are robust with respect to skewness and non-normality. She concludes that parametric statistics can be used with Likert data with small samples and non-normal distributions.

Regarding the number of answer choices or points of the scale, researchers have not come to an agreement. For instance, some have used from four to eleven points

(Leung, 2011). Nonetheless, studies indicate that having more points may affect validity. As for reliability, Likert, who created the scale in 1932, indicates that the number of answer choices can be reduced without affecting reliability (Fabila et al., 2013). Furthermore, the seminal work Guy and Norvell (1977) indicates that reliability is independent from the number of points in the scale. To sum up, scale questionnaires are useful to collect and measure data about opinions, attitudes, behavior, and perceptions. Having clear the concepts, the construction of the questionnaire must obey to some principles to assure its additive and numerical properties. Finally, these properties allow to use of robust statistical procedures with respect to skewness and non-normality.

### **2.3.2.2 Methodological Aspects.**

The items in a scale questionnaire should be clear and short to avoid misunderstandings (Fabila et al. 2013). Also, items can emerge based on literature, interviews with members of the population or the researcher experience. In this ordinal scale, the highest punctuation is assigned to the most positive attitude and the lowest to the most negative. In the case of having negative statements, the coding is reversed (Fabila et al., 2013; Guy & Norvell, 1977). However, the use of negative wording is associated with lower levels of validity and reliability (Hodge & Gillespie, 2007). The use of closed items with a scale of options, gives the participants the chance to choose an answer and this fact makes the coding faster and easier. It allows statistical treatment and analysis, for instance, comparing groups. (Cohen et al., 2018).

Regarding the present study, the Likert-scale questionnaire uses an agreement scale. Thus, this study used and adapted versions of two attitudes questionnaires, one for L2 learners of Spanish (Artamonova, 2019) and other for foreign language learners in England (Taylor and Marsden 2014). The original version of the former instrument included a Likert scale with seven points from strongly disagree to strongly agree with a neutral point. As for the original version of the latter, the instrument included items with four and six gradients to answer. To address the purpose of the current study, the instruments were combined, and the number of the scale points were reduced to four without a neutral point (see Table A2). All items were translated into Spanish. Although the original instruments have already been validated and statistically tested, due to the

adaptations made for the present study they will be subjected to validity and reliability analysis again.

### **2.3.2.3 Validity and Reliability.**

Some authors indicate that the validity of an instrument shows “how well the instrument measures what it says it measures” (Boyle & Fisher, 2007 p. 59). External and internal validity can be considered. The original instruments were designed for different groups of language learners, now they were combined and adapted to be used or replicated in a new context with different population. In relation to content validity, it was checked in the original instruments by groups of experts who checked that items represent the construct that was measured (Field, 2018), experts also eliminated and reduced the number of items in the questionnaires; Artamonova (2020) changed the language and the wording to fit her needs. Taylor and Marsden (2014) did not explain the construction of the instrument.

For this study, the questionnaires were translated into the L1 of the participants to match the context situation and avoid misunderstanding. To achieve external validation, the questionnaire could be given to groups in different bachelors and in a different context than the one in this study. Content validity is addressed through the principles of unidimensionality, univocality and semantic direction. The questions (or stimuli) address one concept only and follow the same direction to comply with the principles of unidimensionality and univocality (Hodge & Gillespie, 2007). Construct validity could be checked using factor analysis in the statistical procedures. Regarding ecological validation, it can be mentioned that the instruments have already been previously validated with other groups of participants in different contexts. The present study replicates the instruments in a new context, after making the necessary adaptations. An agreement scale was selected for the instrument, as it was explained before, there were factors identified in instruments from previous research that were related to attitudes towards EFL language learning (Artamonova, 2020; Taylor & Marsden, 2014). Multilingualism, attitudes towards learning English, the English class, professional benefit and personal development, are factors related to internal states or attitudes of the individual learning a second language (see Table A4).

The reliability of the instrument that seeks consistency of measurement over time, (Boyle & Fisher, 2007; Field, 2018) is obtained checking stability, equivalence, and internal consistency of the instrument. Artamonova (2020) and Taylor and Marsden (2014) checked internal consistency using inter-item correlation through Cronbach alpha coefficient; the former also used factor analysis and the latter a test-retest procedure. Taylor and Marsden (2014) used analyses of variance, regression and Cronbach alpha the two times he administered de questionnaire while Artamonova (2020) used inter-item correlation, internal consistency using Cronbach alpha and exploratory factor analysis was used to group the items under five attitudinal areas. Both authors piloted their instruments. Taylor and Marsden made minor adjustments to improve clarity and internal consistency and Artamonova did not find any issues with the items.

For the present study, stability was determined using equivalent forms of the questionnaire and internal consistency through the inter-item correlation using the Cronbach Alpha coefficient. Consistency helps to identify the items that go in the same direction measuring the same variable adding to the total score and the ones that can be excluded following quantitative criteria (Cohen et al., 2018). As mentioned in Hodge and Gillespie (2007), if a high inter-item correlation is found, it can support unidimensionality. After determining the internal consistency of the instrument, validation was completed as checking construct validity. Correlation analyses were run to identify the factors that affect the relationship between attitudes and learning investment in the study because the factors were identified based on theory.

Some weaknesses must be tackled. A weakness that could be acknowledged based on Cohen et al., (2018) arises when the authors explain that the answers to the items give only a statistic. The authors explain that the items are interpreted from the respondent's point of view and his own context. Consequently, item wording is very important because they might be understood from different areas of knowledge or personal contexts. To assure strong reliability, "anchor statements" may be used for discrimination of responses. Another problem is known as "primacy effect or order effect", when the first questions influence the responses of the following items, or when participants scan the whole questionnaire and there is a predisposition to answer.

Random order of the questions or sections could help to minimize these problems. In this case, the order of the sections in the scale was changed because the items have already been grouped together using factor analysis in a previous study (Artamonova, 2020).

It was decided that even though the original scale included a neutral point, it needs to be removed because if respondents used it to evade specific answers (central tendency effect), as literature reports, it would affect results in terms of reliability. Consequently, using an even number of options is a way to solve the problem. The section of professional benefit was restructured, changing from a rating scale of six points with labels on the extreme points to a more reliable design with four labels, one per column (Cohen et al., 2018, p. 481). Finally, extreme descriptors such as terrible and marvelous were avoided, as indicated by Cohen et al. (2018) because they tend to be avoided and not used by respondents. Other weaknesses are the sampling method and mortality as explained in the previous section.

### **2.3.3 Scale Questionnaire: Investment**

The third instrument used in this study was a scale questionnaire to explore the construct of learning investment (see Appendix A3). Investment in learning as explained in the first section of this study was created by Norton who defined it as the learners' will to learn to obtain something in return (Norton, 2020; Norton & Toohey, 2011; Norton Peirce, 1995). Investment shows the interaction of motivation and commitment that have as result satisfaction and detected benefits in the learning process (Norton, 2013; Norton, 2019). The benefit increases motivation and promotes more investment. On the one hand investment is connected to the person's needs to use the language (Bergson-Shilcock, 2020; Harrison et al., 2013; Lacka-Badura, 2021), in relation to the hopes and expected outcomes or personal benefits. On the other hand, agency has been related to learning investment when interest, commitment, and engagement in learning are shown. This causes a positive cycle where the learner is perseverant, has initiative and sets goals for his own learning and personally contributes to it (Harrison et al., 2013). To sum up, several factors have been identified in previous research that influence learning investment. Motivation, necessity or personal needs, engagement and agency were considered in the present study as factors that may influence investment in language learning.

The first factor, motivation can be defined as “an internal state that enables an action (to learn) and involves understanding the factors that cause this state” (Darvin & Norton, 2021, p.5). Motivation are the intentions or reasons that determine an individual’s behavior to achieve a goal. Motivation gives direction to intentions and actions. The second factor, necessities of language learners vary depending on their differences and their linguistic and sociocultural backgrounds (Ali, 2020) and the expectations they have regarding learning a second language. There are personal and professional needs; interests, heritage, or economic consequences that affect learners (Ali, 2020; Amorati, 2018; Carlioni & Sisti, 2019; Juexuan et al., 2020; Lightbown & Spada, 2006). The third concept, engagement, is inevitably related to action. It refers to the amount (quantity) and type (quality) of learners’ active participation and involvement in a language learning task or activity (Hiver et al., 2021). Sulis (2022) describes three types of engagement: behavioral, cognitive, and emotional. Mercer (2019) refers to other authors who describe engagement using words such as energy and sustained actions where the departure point is willingness that influences behavior which drives the individual to think, act and enjoy the learning process. What Artamonova (2020) concludes is that motivation involves the intention of doing something and engagement is the shift into action. Regarding agency, the fourth concept, Harrison et al. (2013), define it as actions “where the student contributes actively to shape [his or her] own learning” (p. 2), thereby “enhancing their investment in the process” (p. 4). To conclude, learners are more interested in investing effort and time when they are allowed to follow their personal interests and they envision the usefulness to invest effort and time.

To continue with data collection, the third instrument was an agreement scale questionnaire (see Appendix A3) because it fits the needs to operationalize the construct of investment in language learning, which is the dependent variable. Theoretical and methodological principles of quantitative research were followed for the construction of the instrument. Validity and reliability procedures were considered to contribute with an instrument that can be replicated in other contexts with diverse groups of language learners. Now is the turn of the dependent variable, investment in EFL learning, to be measured with a new instrument (see Appendix A3). Subjective data were collected again from higher education students using an agreement scale questionnaire. The following

sections describe the theoretical and methodological aspects related to the use of scale questionnaires.

### **2.3.3.1 Theoretical Aspects.**

Based on the characteristics of scale questionnaires, they can collect data using prompts or stimuli that cause a reaction on the respondent who selects values in a scale (Dörnyei & Taguchi, 2010). One of the objectives of the present study is to collect numerical data to examine investment towards EFL learning among higher education students. Using this kind of instrument, researchers can establish different degrees to measure subjective data as in this case, the perception of personal investment in language learning.

To design the questionnaire, the researcher must be clear about the variables which are going to be explored (Fabila et al., 2013), to be able to build the instrument following the pertinent theoretical principles. As mentioned in the previous section, based on the classical measurement theory, the three central principles for the design of the questionnaire, unidimensionality, univocality and proper statistical analysis (Hodge & Gillespie, 2007), were followed.

Another aspect that requires attention is the scale where is necessary to present interrelated options that follow a gradual sequence to express the opinions. As mentioned before, there is not a rule to select the number of options, so is the researcher who justifies the choice regarding the number and the use of a neutral point (Cohen et al., 2018, p. 483; Hernández & Izquierdo, 2020; Hodge & Gillespie, 2007; Leung, 2011) because studies indicate they can affect validity. Regarding reliability, there are studies that indicate it is independent from the number of points in the scale (Fabila et al., 2013; Guy & Norvell, 1977). Nevertheless, Guy and Norvell demonstrated sensitivity of the respondents who do not use extreme responses to compensate the missing point.

After the previous issues have been sorted out, the researcher assigns numerical values to the answer choices, and then is when the scale acquires numerical properties to be treated as an interval. There still are researchers who argue about equal intervals of measurement (Gravetter et al., 2020); and “equal-sized gradation between the points” (Cohen et al., 2018, p. 481).

To sum up, agreement scale questionnaires are useful to collect and measure opinions and attitudinal data. Identifying the variable to measure is crucial. Following the theoretical principles during the construction, assures the additive and numerical properties of the scale that allow the use of robust statistical procedures.

### **2.3.3.2 Methodological Aspects.**

The items in a scale questionnaire should be clear and short as cited in Fabila et al. (2013) and avoid negative wording not to use reverse coding, as explained in the previous section. The items can be based on literature, and the researcher's experience. Regarding the present study, the questionnaire used an agreement scale where the highest punctuation is assigned to the most positive attitude and the lowest to the most negative. Negative statements were excluded to avoid reverse coding (Fabila et al., 2013; Guy & Norvell, 1977) because the use of negative wording is associated with lower levels of validity and reliability (Hodge & Gillespie, 2007). The use of closed items with a scale of options, makes the coding easier (see Table A5). This new instrument was subjected to validity and reliability analysis. An agreement scale was selected for the instrument because, as it was explained before, there are factors that previous research has correlated to investment. Motivation, necessities, engagement, and agency are concepts related to internal states or perceptions of the individual, that is why a frequency scale was no suitable to measure this variable that relates to opinions, beliefs, and feelings of the respondents (see Table A5).

The items in Table 2.2 are examples that show that the principles of unidimensionality, univocality, and semantic direction were considered. Positive wording was used to avoid having a negative effect in validity and reliability and to elude the use of reverse coding. Additionally, four points were used in the scale to eliminate the central tendency effect.



**Table 2.2.**

*Example of items and scale points.*

	Disagree	Partially disagree	Partially agree	Agree
Section 1: Motivation refers to an internal state that enables an action ("learning").				
1. I am interested in having the materials ready for the class.				
2. I am very persistent in completing my English class activities.				
Section 3: Engagement refers to the quantity and type (quality) of learners' active participation and involvement in a language learning task or activity.				
33. I make an effort to complete the reading exercises, even if they are difficult for me.				
38. I speak in English with the teacher outside class, even if I find it difficult.				

### **2.3.3.3 Validity and Reliability**

To address the issues of validity and reliability different elements were considered. External validation is addressed through checking ecological validity when the situation observed in the context can be transferred to another as explained ahead. Content validity is addressed through the principles of unidimensionality, univocality and semantic direction. The items (or stimuli) address one concept only and follow the same direction to comply with the principles of unidimensionality and univocality. The questionnaire items are submitted to experts' validation (Field, 2018) who check that the items represent the construct that is being measured (see Table B1). Construct validity allows the researcher to prove that the construct shows high inter-correlation because it clusters the items of the questionnaire (Cohen et al., 2018). Regarding construct validity, it could be checked using exploratory factor analysis when the factors that affect the relationship between variables (attitudes and learning investment) in the study have neither been identified nor grouped. Nevertheless, in this study, the factors have been grouped in previous research. The other option is using correlation coefficients to identify the relationships between them when the factors were previously identified and grouped.

Regarding face and ecological validity, the instrument was piloted with other groups of participants in the same context to show that the items are sensitive to the characteristics and context of the participants' reality (Cohen et al., 2018). It is important to consider the particular situation and specific factors of the research site. In this study, groups that have complied with the required English instruction were called to participate and help to indicate if there are items with difficult wording that may cause misunderstandings or that are not related to the topic.

The reliability of the instrument (Boyle & Fisher, 2007; Field, 2018) is obtained checking stability, equivalence, and internal consistency of the instrument. For this scale questionnaire, stability was determined using equivalent forms of the questionnaire and internal consistency through the inter-item correlation using the Cronbach Alpha ( $\alpha$ ) or coefficient alpha, expecting values of  $\alpha = .7$  or more. The latter helped to identify the items that could be excluded following quantitative criteria (Cohen et al., 2018).

The weaknesses that could be acknowledged, based on Cohen et al., (2018) are the same as the ones in the previous section, as it is the same kind of instrument. The first one is item personal interpretation, the second the use of anchor statements and the third the primacy effect. To tackle these weaknesses, attention must be paid to item wording, use clear anchor statements where necessary to increase reliability and use random order of questions or sections to avoid the primacy effect. It was decided to use a four points scale without neutral point to eliminate the central tendency effect that affects reliability. Finally, extreme descriptors were not used, as indicated by Cohen et al. (2018) because respondents tend to avoid them. Other weaknesses are the sampling method and mortality due to drop out of participants as explained in the previous section.

### **2.3.4 Interview**

#### **2.3.4.1 Theoretical Aspects.**

The fourth instrument used in this study was an interview. As described by Cohen et al. (2018), an interview is a social encounter between two or more individuals where they can interchange opinions or points of view. It is not a daily conversation, because it has a purpose. It is a series of questions that takes place when an appointment is previously scheduled (Richards, 2003). The interview gives the researcher the opportunity

to obtain information in an oral exchange that is constructed by the interviewer and the interviewee. Interviews may have different purposes such as understanding a situation, helping as therapy, to get a job, or as instruments to collect data. In general, interviews give the researcher the opportunity to collect information about opinions, beliefs, perceptions, and knowledge of the participant in relation to a particular object or situation (Yin, 2014).

There are different types of interviews. Among them we can find the structured interview, the semi-structured interview, and the unstructured interview (Cohen et al., 2018; Yin, 2014). Structured interviews are planned and standardized, they follow a pattern and fixed questions (Mackey & Gass, 2005). Semi-structured interviews required a previously organized process, where the content or questions to be managed are organized in advance to be able to collect information on a specific topic (Cohen et al, 2018). Unstructured interviews seem to be more informal, nevertheless, the interviewer has a list of topics or concepts with open-ended questions to guide the interviewee with freedom and let the conversation flow (Mackey & Gass, 2005). In the same vein, Salmons (2015) explains that depending on the type of interview the questions go from forced or limited choice answers questions to open-ended questions asked in the same or variable sequence; with the same or different follow-up questions based on responses; or a conversation with suggested themes. The same author explains that one predominant difference is the freedom left to the interviewer to make modifications, but all of them must be planned and have a purpose to determine the openness, the degree of structure, extent if they are exploratory or hypothesis-testing, or if they try to describe or interpret a situation or problem.

#### **2.3.4.2 Questions.**

The present study used a semi-structured interview to collect information from participants in relation to their attitudes and language learning investment, regarding compulsory language learning in higher education. The open questions are based on information previously collected with quantitative instruments and also on other researchers' instruments and results found in previous research. As Creswell (2014) indicates, there must be a set of central questions referring to the main topics or

dimensions of interest and sub-questions or follow-up questions must be included to guide the interviewees to focus on the topic or help them to expand their answers (see Table B2).

#### **2.3.4.3 Methodological Aspects.**

Semi-structured interviews with open-ended questions were used to collect data because, even when the topics and questions are given, there is the opportunity to modify the wording or change the sequence of the questions depending on the answers of each participant. Moreover, the participants can feel a degree of freedom to express, expand or explain their ideas, beliefs, or perceptions on the subject matter. The topics in the present study, are the same used in the quantitative questionnaires and the interview gave the participants the chance to expand or explain their answers (Yin, 2014). The interviews were recorded for subsequent analysis. After the period of data collection with semi-structured interviews, the recordings were transcribed.

The literature review showed that there are different opinions and qualitative approaches to analyze qualitative data and they are frequently related to a specific theoretical approach. For instance, grounded theory, ethnography, phenomenology, discourse analysis, action research and thematic analysis. The latter is a common method used to identify, describe, organize, analyze, and report information grouped in themes found within the data set. (Nowell et al., 2017). Thematic analysis can be used with interviews because it allows to identify patterns of themes in the data. It is a flexible method useful for exploratory and deductive studies (Mortensen, 2022). For instance, to explore what, why or how something happens or in deductive studies to find out how a specific technology is used. This author explains that it helps the researcher when there is not a clear idea of what is going to be found, but also when there is a clear idea of what is being searched.

Accordingly, it has been said that thematic analysis helps to examine similarities and differences, to summarize important features and besides helping to work with large amount of data, it also helps to produce an organized report (Nowell, et al., 2017). In the same vein, Flick (2014) indicates that thematic analysis helps to reduce the amount of data categorizing them, that is a way to condense the information. Thus far, a theme

implies a broader level than a code, a theme relates concepts, beliefs, or actions. Moreover, thematic analysis maintains the generic relationship between data and context through the categories. For instance, the latter could be explained with a case study where data interpretation and analysis are linked to the context, the setting and the participant (Flick, 2014; Miles et al., 2014). This is a reason that supports that to interpret data, it is of utmost importance to be familiarized with the data what demands reading, highlighting interesting details and even writing comments or taking notes of details. Some crucial points for thematic analysis demand from the researcher to respect the data, to be honest and be absolutely clear while explaining the procedure; all these elements contribute to the validity of the results (Mortensen 2022).

To analyze qualitative data, Flick (2014) explains that there are two strategies that can be used. The first strategy can be similarity-based, one that compares data looking for common features and for which time and place are left aside. The other strategy, called contiguity-based is the one that seeks for the relationships involving time and space. The first strategy mentioned by this author is frequently used in qualitative research, and it is the one that uses comparisons to group and compare data. A common way to do it is coding. As indicated by Flick (2014) and Mortensen (2022), coding is an iterative process where the rater or person who assigns the codes goes back and forth searching for patterns or themes to describe and classify or categorize data. The codes represent the content of the data and try to summarize the information and help to identify similarities or differences in the information (Saldaña, 2009). Codes are “words or short phrases” (p. 3) that name salient characteristics of data. One purpose of the coding process is to find patterns or some consistency in the data. Based on Miles et al. (2014), there are different coding approaches, but the elemental methods are: descriptive, in vivo and process coding. In vivo coding seems to fit some characteristics of this study. It uses words or phrases from the participants to record the codes, it is appropriate for researchers with scarce coding experience and the phrases that are continuously repeated guide to identify patterns (Miles et al, 2014). During the coding process there may be passages or data that are interconnected or within a larger piece of information, in this case, Saldaña (2009) explains that simultaneous coding can be applied. This means that two codes can be used for the same piece of information.

Another purpose of the coding process is to link ideas, it is not only just using labels, neither a one-shot procedure. Flick (2014) explains that coding is a fundamental step in the process of analyzing qualitative data. It means that parts, segments, or units of data from different topics, can be subsequently grouped and ordered by categories (Auerbach & Silverstein, 2003; Bryman & Burgess, 2002; Miles et al., 2014). There can be organizational, substantive, and theoretical categories (Flick, 2014). Nevertheless, they can overlap between each other. Substantive categories can be obtained from the participants' words through open coding of the data, and they describe concepts and beliefs. According to Brinkmann and Kvale (2009), the research questions help or guide the researcher to identify the themes that lead to find the answers to the questions and they also help to identify patterns. When categories are organized, themes can be identified and expressed through words or phrases that point out or focus on crucial characteristics or situations (Saldaña, 2016). Based on this literature review, thematic analysis was chosen to analyze the data of the present study to find the answer to the research questions of the study.

- What is the impact of compulsory EFL education on the type of language learning attitudes and level of language learning investment among higher education students from programs which are not related to the EFL profession?
- What factors underpin the relationship between students' attitudes towards compulsory EFL learning and language learning investment among higher education students from programs which are not related to the EFL profession?

Once the data collection was finished, it was time to proceed with the coding procedure. Using a deductive approach as mentioned before, a coding system was established a priori based on the literature review. The first time, pre-coding was done while underlining information related to the questions of the interview (Saldaña, 2009). Next, codes were used to label and organize the information (see Table 2.3; Flick, 2014; Nowell et al, 2017).

**Table 2.3***Themes and Subthemes for Coding Data*

Motivation	Necessities	Engagement	Agency	EFL Learning	English Class	Professional Development	Personal Benefit
Satisfaction	Communication	Interest	Extra activities	Obligatory	Learning Strategies	Opportunities	Personal achievements
Insecurities	Job	Effort	Optional Studies	Previous Experience	Teaching Strategies	Postgraduate Studies	Scholarships
Lack of confidence	Job requirement	Enjoyment	Personal Choice	Usefulness	Technology	Working Abroad	Lack of Information
Criticism	Traveling	Likes		Valuable	Materials	Access new Information	
Frustration	Graduation requirement	Distractions			Peer Help	Short Vision	
Entrepreneurship							

Then, after revisiting the data several times, categories were identified. For the second cycle, all the information was organized in a table under labels that identify codes. In the table, the participants' own words were used to keep the essence and avoid modifying the meaning with personal judgements or subjective predispositions (Saldaña, 2009). The table helped to identify patterns, repetitive or consistent similarities and differences. Additionally, as computer programs can help to manage data, coding, searching key words and making graphics (Brinkmann & Kvale, 2015), a software to organize and manage the data was considered. There are different open and closed software packages known as Computer Aided Qualitative Data Analysis Software (CAQDAS). These software packages contribute to manage a large amount of qualitative data and help to conduct a thematic analysis. Some of them are NVivo, MAXQDA, Atlas.ti, Qualtrics, and others. Nonetheless, Atlas.ti resulted to be affordable for this study to carry out the qualitative phase analysis, besides, academic support could be requested and provided by researchers with experience.

For the third cycle related to searching for themes, all the interview transcripts were imported to the software Atlas.ti and the codes were revised. Using the predefined codes as guide. Themes were identified while grouping the codes. Finally, the fourth cycle was the revision of the whole set of codes and categories to assure they reflect the meaning of the data. As Nowell et al. (2017) explain, during the process there might be the

necessity of recoding data or deleting codes if they are not found substantially related to the rest.

#### **2.3.4.4 Trustworthiness in Qualitative Research.**

In qualitative research different authors have contributed to the debate regarding using the terms of validity and reliability. These terms contribute to establish rigor in quantitative research where objectivity can be pursued. Nevertheless, qualitative research should focus on procedures that contribute to represent the meaning of the participants and reduce bias (Lietz et al. 2006). In line with this, these authors describe that Lincoln and Guba in 1985 used the concept of trustworthiness that is related to the results of a study, and it is achieved when the findings reflect the meanings described by the participants. Different concepts are used to refer to different strategies in the attempt to assure the equivalent validity and reliability, for instance, credibility, transferability, dependability, and confirmability (Cohen et al., 2018).

Validity refers “to the truth, correctness and strength of a statement” (Brinkmann & Kvale, 2015, p. 282). Different forms of validity can be checked. External validity is related to issues about the population. In this case we can refer to generalizability and ecological validity. Generalization has been addressed by qualitative and quantitative research and two main strategies have been accepted in social research. Different names have been suggested to talk about generalization in qualitative research as Flick (2014) states. The term transferability can be used to refer to the generalizability of the investigation (Nowell et al., 2017). Nevertheless, Flick (2014) explains that as qualitative research does not use probability sampling the term “empirical generalization” (p. 540) is good to describe the presence of features that come from individuals or groups for large populations and may fit to many different situations represented by the initial case (Yin, 2014). The representativeness of the sample can be transferred to the population to generalize. A second type of validity that may contribute to external validity is ecological validity if the observations of one context can be transferred to another. In the end, to open the possibility to transfer the findings to other cases or contexts, the researcher should describe in detail the process to allow other researchers judge transferability in their own contexts.



Regarding internal validity, different types can be addressed, for instance, face, content, construct, concurrent, convergent, and criterion related (Brinkmann & Kvale, 2015; Cohen et al, 2018; Yin, 2014). According to Yin (2014) face validity is addressed when the questions used in an interview look as they measure what they say they measure. The measure can be compared with another, when they agree, validity is assumed. Content validity can be checked by experts, who give feedback regarding wording of the interview questions and follow up questions. Construct validity is related to the categories that must be meaningful to the participants, in relation with what they experience and see (Cohen et al., 2018). In relation to this, Brinkmann and Kvale (2015) indicated that construct validity involves the analysis of the correlations with other relationships of the construct. Additionally, these authors explain that in qualitative research some actions that may help to assure validity could be using extreme cases, replicating findings, and getting feedback from the participants. The latter is explained by Cohen et al., (2018) as respondent validation and it needs to be addressed because it helps to confirm that the researcher understood the situation the same way as the participant who accepts or confirms what is reported by the researcher.

Reliability implies that the results can be controlled, consistent and predictable, however, as Cohen et al (2018) claim, in qualitative research the term reliability can be replaced with credibility, consistency, dependability, trustworthiness, and transferability among others. These same authors state that “trustworthiness replaces the conventional views of reliability and validity” (p. 279). Regarding qualitative research, Brinkmann and Kvale (2015) state that reliability concerns about the consistency and trustworthiness of the findings. It is in relation with the possibilities of the findings to be reproduced in another point in time by other people. Whatever term is used, the important fact is to be consistent and accurate with what really happens in the setting that is being observed and what is recorded as data by the researcher.

There are different factors mentioned by the same authors that affect reliability. For instance, the interviewing technique that may influence the answers, the wording of the questions, the transcription of the interviews and the agreement between coders just to mention a few. Nevertheless, it has been said that there can be many interpretations of data, as they depend on the researcher’s registers, perception, and understanding. In

relation to the terms mentioned above, Cohen et al. (2018) explain that dependability implies that the participant agrees with what the researcher reports, what is called respondent validation. To this respect, Nowell et al. (2017) state that dependability is achieved when there is a "logical, traceable and clearly documented" process (p.3). In both cases the crucial point refers to getting to comparable or equal conclusions, but not contradictory ones.

In qualitative research, stability and equivalence may also be addressed to achieve reliability. Stability can be claimed when the same observations can be made at different times. Additionally, in terms of equivalence, it is achieved when the same observations and interpretations may be conducted at the same time. Furthermore, another concept that contributes to reliability is the inter-rater reliability that is achieved when different observers make the same observations and interpretations of a given event (Cohen et al., 2018). The process demands consistency and accuracy from the observers and piloting the instrument can contribute to ensure validity. Additionally, the data collection process requires from the participant to be authentic and honest, to respect reality and to give in-depth answers to provide the researcher with rich material to work with. Reliability can be increased when the interview is piloted, the interviewers are trained so they do not influence the interviewees, and during the coding process. In the end, in qualitative research, trustworthiness may be determined or defined in terms of credibility, transferability, dependability and confirmability (Cohen et al., 2018). However, during the process, data collection, analysis and writing imply going back and forth continuously; this means it is not a linear process (Nowell et al., 2017).

#### **2.4 Administration Procedures for the Scale Questionnaires and Interview**

It is of utmost importance to standardize and clarify the administration process because errors that affect the results can be avoided. The error can result from the context, the respondent, or the questionnaire itself (Boyle & Fisher, 2007). The errors of the questionnaire itself, that can affect validity and reliability are responsibility of the author or researcher, while the errors from the participant can be minimized with preparation for the administration, organization of the materials and the administration procedure which must be specified in a manual or protocol for the assessor to check in advance. A protocol

was prepared for the paper-based questionnaire and a second one was used for the pilot and final sample interview as well.

#### **2.4.1 Paper-based Version: Scale Questionnaires**

When the questionnaire was designed following the principles explained before, a paper-based version was used to pilot the items with a sample similar to the final sample integrated by higher education students who were not related to the language teaching profession. The researcher scheduled an appointment with each group in a comfortable room to have proper conditions for the administration of the questionnaires. Participants were informed of their rights and asked to give their consent to continue. They answered individually and at the end they answered questions regarding the items they have answered as part of the validation process.

#### **2.4.2 Online Version**

Online data collection became an option after 2010 according to Dörnyei and Taguchi (2010). In this study, an online instrument was selected for the final sample of the study, because of the difficulties to set an agenda that did not affect the groups' curricular activities at the end of the school term. It is necessary to remember that a convenience sampling procedure was selected because it is the case of captive groups of students what ends in a homogeneous sample. In this vein, the collection of e-mail addresses was not a problem because they were available at the school's administration office. However, as Denton et al. (1988) explain, the time of the year or school term affect the rate of response, what affects the project. Administering the questionnaires at the end of spring, or close to the end of the period might affect the response ratio, and it needs to be considered. Once the participants are invited and informed, and accept to participate, administration of the online instruments will be self-running (Dörnyei & Taguchi, 2010). Email reminders including the link to the instrument increase the response ratio (Denton et al., 1988). Another point in favor of online data collection is the advantage of the automatic recording of answers that saves time because data-entering step can be skipped. This procedure also results in economic and ecological benefits as it reduces the use of paper and photocopies. Nevertheless, traceability is technically possible, so there

must be good rapport with the researcher who should offer reassurance of anonymity and confidentiality to the respondents.

To administer the paper-based questionnaire to the pilot group, the following steps were followed:

#### First Phase (Quantitative)

1. First the participants were informed, and they received instructions.
2. An appointment was scheduled per group, and they gathered in the usual classroom.
3. Paper based questionnaires were distributed.
4. They included items for the participants' consent on the first page (see Appendix A).
5. The answers were analyzed to identify extreme cases and call them to participate in the interviews.

#### Second Phase (Qualitative)

6. The interviews were online via Zoom and recorded with the authorization of the participant. The interview took from 30 to 45 minutes.
7. If a participant rejected the invitation, another participant could be called in.
8. If the internet connection were lost, the interview would be rescheduled to finish.
9. During the interview the participant was greeted, and the interviewer explained the procedure. Screenshots of the answers were presented to the participant during the interview to help the participant expand or clarify the answers.
10. At the end, the interviewer indicated when the interview was over, asked if there was something important to comment about and thanked the participant's help and availability to participate.
11. If there were any further questions the participant could contact the interviewer.

The same procedure was followed with the final sample. The difference was that an online version of the questionnaire was used. The participants took time between their classes, or they chose an appropriate moment in the afternoon to answer a Google form. The answers were collected automatically, and the results were analyzed to identify

extreme cases and call them to participate in the interviews. The design, piloting and administration of the instruments was done following a timetable to comply with the requirements of the school term calendar. (see Table B3).

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## Chapter 3: Analyses and Results

### 3.1 Quantitative Data Analysis Procedures

This chapter presents the procedures for the analyses of the data and the findings. In this mixed methods study three instruments were used, and several statistical procedures were applied to demonstrate the validity and reliability of the instruments (Cohen et al., 2018). Following the theory, Kruskal-Wallis tests were used to corroborate the equivalence of forms and the stability of answers. Cronbach Alpha coefficients were run to check the internal consistency of the Likert-scale questionnaires and Spearman's tests to check the correlation between the dimensions of both instruments as well. The information is divided in two main points. The first main point describes the procedures followed for the pilot and final versions of two Likert-scale questionnaires, the first one an agreement Likert-scale investment questionnaire and the second, an agreement Likert-scale attitudes questionnaire. The second main point presents the results of both questionnaires distributed to the final sample of the study. All the statistical tests were run using the SPSS v26 software package.

#### 3.1.1 Piloting of the Quantitative Instruments

As mentioned before, there were three instruments. The first one was a survey and then, two Likert-scale questionnaires which were designed as described in the previous section (see Tables A1-A3). The survey was distributed to collect sociodemographic information of the pilot group and the final sample. Regarding the Likert-scale investment questionnaire, to this end, the various dimensions of the questionnaire were operationalized (Cohen, 2018; Dörnyei & Taguchi, 2010), and the preliminary version of the instrument was subjected to various validity and reliability procedures (Cohen, 2018; Muijs, 2004). The responses of the participants were then analyzed (Field, 2013; Larson-Hall, 2010) to explore the interaction of the various dimensions of language learning investment. Finally, the final version of the investment questionnaire was also distributed to the final sample of the study. With respect to the Likert-scale attitudes questionnaire, the reliability was analyzed, and the final version of the questionnaire was distributed to the final sample of the study as well.

To begin the study, the participants filled out a sociodemographic survey, where they provided information about age, gender, years of school instruction and linguistic background information (see Table A1). During the pilot, one participant was excluded because this participant left unanswered one survey section. It was a homogeneous group of Spanish speakers. Five participants indicated that at least one of their parents had studied English. Other two respondents indicated that their parents speak an indigenous language.

The pilot student sample included six male and 35 female students. They were at the end of the second year of college and finishing the fourth compulsory English course. In their program, this course comprised six hours of English lectures per week. Most of the participants were between 17 and 20 years old; 17% of the participants were between 21 and 24 years old; and 5% were 25 years old or older. As it is shown in Table 3.1, learners acknowledged receiving EFL instruction during middle school and high school only. Two participants informed they had additionally attended EFL courses in a private language institute. Regarding the learning of English, their parents supported the idea of compulsory EFL education. The students (95.1%) had never travelled to an English-speaking country although some of them (48.7%) have relatives living abroad.

**Table 3.1**

*Sociodemographic Information of the Pilot Sample*

	Spanish	English	Indigenous Language
	%	%	%
Student's L1	97.6		2.4
Parent's L1	95.2		4.8
Parents that studied English		11.9	

**Table 3.1** Continued

	Yes	No
L2 studies in elementary school	16.7	83.3
L2 studies in secondary school	26.2	73.8
L2 studies in preparatory school	81.0	19.0
Public school	88.1	11.9
Private school	21.4	78.6
Language institute	4.8	95.2

Table 3.2 presents the participants' reasons to learn English. As the table shows, the main reason for this group or learners was that English is a subject included in the curriculum. However, they acknowledged English could be useful for other activities, such as traveling, communicating with people and leisure activities. For instance, understanding while listening to songs, movies, or video games. It results interesting to mention that only 35.7% of the participants considered the possibility of learning English to study abroad.

**Table 3.2**

*Reasons to Learn English Given by the Pilot Sample*

	Yes	No
It is a subject in the curriculum	100%	
My parents decided	26.2%	73.8%
To travel	45.2%	54.8%
To study abroad	35.7%	64.3%
To communicate with people	76.2%	23.8%
To understand songs, movies and video games	85.7%	14.3%



The same procedure was followed with the final sample group to collect the sociodemographic information and previous language learning experience.

### **3.1.2 Investment Questionnaire: Pilot Sample**

Due to the objectives of the current study, the participants were selected using purposive convenience sampling. While this procedure is non-probabilistic, it allowed for the selection of participants whose profiles would align to the nature and phases of the research.

The first group of participants in the first phase of the study was composed of six research professors who acted as experts in the process of content validation. Five of them were Mexican and native speakers of Spanish with international certifications that confirm their English proficiency. All of them were affiliated to different universities in Mexico. The sixth professor was a Canadian English native speaker working at a Canadian university. She has knowledge of Mexican Spanish which made the process easier. They all have experience training pre-service teachers and in-service teachers in graduate programs. They have also conducted and published research on the learning of English in public education.

The second group of participants consisted of higher education students who were not related to the language teaching profession. The selection was based on availability and accessibility criteria (Cohen et al., 2018; Creswell, 2014). The requirements to be part of the sample were: enrollment in a BA program not related to language teaching and that compulsory EFL courses were included in their undergraduate program. The students called to participate in the validation process, could also give their opinion about the length of the instrument and unnecessary questions. They have the same profile as the participants of the study and have already finished the language learning period so they should be more aware of the process. However, the participants have a special contextual fact that must be considered, they have been studying online due to the pandemic, so this might modify their attitudes towards language learning and the amount of time and effort they have invested.

The initial sample for piloting procedures, consisted of 41 students that satisfied the selection criteria. These participants were enrolled in a BA in Inclusive Education in •

the Southeast of Mexico. Before starting the data collection process with the participants, the authorities of the institution granted the access through a letter of ethical consent. The participants were informed in person of the research purpose and details; confidentiality and anonymity were assured, their right of leaving the moment they decided was explained and their consent to use the data was sought within the instrument.

The pilot sample included 6 male and 35 female higher education students. They were finishing the second year of college. They were at the end of the fourth English course in their program, where they completed six hours of English classes per week. The range of age was between 17 and 20 years old; 17% of the participants were between 21 and 24 years old; and only 5% were 25 years old or older. Even though educational policies dictate for EFL learning in elementary education, these learners acknowledged receiving EFL instruction during middle school and high school. Only two participants informed they had attended EFL courses in private language institutes. Regarding learning English, their parents supported the idea of compulsory EFL education. All students had never travelled to an English-speaking country although some of them have relatives living abroad.

### **3.1.2.1 Content Validity: Pilot Version.**

As Cohen et al. (2018) state, to validate an instrument is basically to prove that it measures what it intends to measure, that it represents the theory, concepts, or conclusions it intends to explain. While there are different forms of validity, this instrument was subject to content and construct validity. Content validity refers to the topic, domain or concepts that should be covered in an instrument. The relevance of the content can be evaluated through professional judgement (Cohen et al., 2018). This kind of validity ensures the coverage, and the relevance of an instrument. To carry out this type of validation a committee of six experts in the topic reviewed and evaluated the content of the instrument. This helps to avoid bias that might happen when a single researcher revises the items (Cohen et al., 2018, p. 262).

To check content validity, the experts were asked to determine whether the items represented the construct that was being measured in each section (Field, 2018). To this end, the jurors rated first the congruence between the items with the construct and their

corresponding dimension. Then, they were asked to assess the item comprehension difficulty. The jurors expressed their opinions rating the items, writing comments on individual items, and providing feedback related to wording to make items clear and unambiguous (see Table B1).

In order to examine content validity results, the jurors' answers were treated using descriptive statistics. For each item, two agreement ratios were computed. One ratio was obtained to identify the congruence between the item and the construct. The other ratio was computed to identify the congruence between the item and its comprehensibility. To obtain these ratios, the number of experts that expressed agreement was divided by the total number experts. For instance, item 1 in section 1 elicited agreement from 5 experts during the examination of the item and its dimension. This item, therefore, yielded an agreement ratio of 83.3% (i.e.,  $5/6 \times 100$ ). If the item obtained 100% of agreement it was maintained; if the item achieved between 50-99% agreement, it was modified. If the item obtained below 50% of agreement, it was omitted. The percentages of the answers of the participants of the pilot sample are presented by section on Tables B4-B7.

### **3.1.2.2 Stability of Answers Reliability.**

To verify the stability of answers, the data collected through parallel forms of the questionnaire were examined using between-group comparisons. As Field (2018) states, if the answers of both versions of a questionnaire give similar results, stability is achieved. To this end, first the normal distribution of the data collected for each item in both versions of the questionnaire was tested using the Kolmogorov- Smirnov test. In this test, normality is assumed when the significance value is greater than the alpha level of .05. From this result, decisions are taken to choose the following tests to use (see tables C1-C5).

Due to the absence of a consistent normal distribution in the questionnaire data, non-parametric analyses were used to test whether the participants provided similar answers between versions, and therefore, could be considered reliable. As the data came from independent samples, non-parametric Kruskal-Wallis tests were run on an item-by-item basis, to check answer differences between the two versions (see Tables D1-D5). This way stability of answers can be proved if the results exhibit a  $p$  value  $> .05$  which

would indicate that both versions have similar results and there are no significant differences.

### **3.1.2.3 Internal Consistency Reliability: Pilot Version.**

After checking the stability of answers, the Cronbach Alpha and inter-item correlation coefficient were verified in order to identify the questionnaire's internal consistency. To claim reliability with the Cronbach Alpha test, the expected value for the internal consistency should be greater than  $\alpha = .7$  to confirm that the unidimensionality principle was accomplished. As the items were constructed and initially grouped into dimensions, independent Cronbach analyses for each dimension were run (see Tables E1-E4).

To check the inter-item correlation, a comparison between items is done. As mentioned above, the analysis was run by dimension because the items were previously grouped. The correlation tests showed a corrected correlation coefficient for every item. The result should be greater than .3 to say that an item contributes to the dimension and in consequence it would be retained in the questionnaire.

### **3.1.2.4 Construct Validity: Pilot Version.**

Construct validity is fundamental because it refers to the construct itself or its explanation and not to methodological factors to operationalize it. It is necessary to have a clear and warranted construction of the addressed issue that agree with the construction of other researchers. It is crucial to define the construct and to use the correct instrument to operationalize it. Cohen et al. (2018) cite other authors who explain that construct validity can be addressed by different techniques. Construct validity could be checked through correlation and factor analysis. When different methods find a high inter-correlation when researching the same construct, they are *convergent*. Thus, construct validity was operationalized through convergent validity. Convergent validity refers to elements or factors that are related and it is demonstrated they are consistent with each other. Convergent validity is proved when the relation between factors that was previously assumed, is found running tests to find the appropriate indicators. To prove the latter, correlation analyses were used because they explore the relationships among the dimensions (Dörnyei & Taguchi, 2010). Since the items were conceived independently for

each of the dimensions of interest and the independent reliability analyses for each dimension showed high inter-item correlation coefficients (Field, 2018), correlation analyses were used to achieve convergent validity and thereby prove the relation among the dimensions of the questionnaire (Cohen et al., 2018).

To check the normal distribution of the data by dimension in both versions of the questionnaire, the Kolmogorov- Smirnov test was used. To do this, the results per item were added to obtain a result per dimension. In this test, normality is assumed when the significance value is greater than the alpha level of .05. Having these results, would help to determine the normality or absence of normality in the dimensions to decide the treatment that should be given to the data in the following steps.

It was of interest to identify the relationship between the different dimensions of investment in language learning. After the exclusion of the items that did not obtain a  $p$  value  $> .05$ , the correlation analyses were run using scores that result from the addition of the remaining items within each dimension. Due to the skewness of data (i.e., the absence of normality) in the majority of the items and dimension scores, one-tailed Spearman tests were run with the four dimensions of the questionnaire. To interpret the strength of the correlation results the reference of Hinkle et al., (2003) for the social sciences was used as follows:  $-0.3$  to  $+ 0.3$  = negligible;  $+ 0.3$  to  $+ 0.5$  = low;  $+ 0.5$  to  $+ 0.7$  = moderate;  $+ 0.7$  to  $+ 0.9$  high or  $+ 0.9$  to  $1.0$  very high (see Table F).

### **3.1.3 Investment Questionnaire: Final Study Sample**

The participants of the final sample of the study were also higher education students not related to the language teaching profession. The sample was selected using a non-probabilistic procedure, convenience sampling, which allows to work with a convenient group which is available and accessible to the researcher (Cohen et al., 2018). The group was selected following similar requirements to the ones of the pilot group. The participants were enrolled in a BA program not related to language teaching, the difference this time was that they were initiating their EFL courses in their undergraduate program as they were enrolled in the first semester. Just to emphasize, they had not completed a language course in the institution. They were enrolled in a BA in Inclusive Education in the Southeast of Mexico. The access to these students was granted through a letter that

was signed by the authorities of the institution. The participants and their teacher were informed of the research purpose and details of the procedures, and they were assured anonymity and confidential treatment of all the information and data they provide. They were informed they had the right to leave any moment they decided and, if they accepted to participate, their consent to use the data was needed (see Table A3).

The sample included 64 participants, 5 (7.6%) male and 59 (92.5%) female higher education students. The group was in the first semester of college. They had not finished any language course. The program included six hours of English classes per week. The range of age was between 17 and 20 years old (80.3%); 16.7% of the participants were between 21 and 24 years old; and only 3% were 25 years old or older. Current educational policies indicate that EFL instruction is mandatory, yet 72.7% of respondents indicated that they received no EFL instruction. The participants acknowledged receiving English language classes during middle school (57.6%) and high school (87.9%). Only six participants (9.1%) indicated they had the opportunity to attend EFL courses in private language institutes. Even though only 10.6% of the parents have studied English, 99.9% of them support the idea of compulsory EFL education. Just as in the pilot group, none of the students of the final sample had ever travelled to an English-speaking country although some of them (33.3%) have relatives living abroad.

#### **3.1.3.1 Stability of Answers Reliability.**

To verify the stability of answers of the investment questionnaire, even it was checked in the pilot version of the instrument, two versions were used to make comparisons between groups. As theory indicates, the answers in both versions should be similar to claim stability (Field, 2018). A Kolmogorov-Smirnov test was used. The expected value to say that there is a normal distribution of data should be greater than .05.

It was identified that there was not a consistent normal distribution in the dimensions of the questionnaire. In consequence, the option to use were non-parametric analyses. As two different independent samples were used, Kruskal-Wallis tests were run on an item-by-item basis and determine if there were differences between the versions.

Stability of answers is proved when the results show  $p$  values  $> .05$  which indicate there are no significant differences between versions (see Tables G1-G6).

### **3.1.3.2 Internal Consistency Reliability.**

When the results of the stability of answers assured the reliability, it was time to demonstrate the reliability of the instrument using the Cronbach Alpha and inter-item correlation coefficients (see Tables H1-H4). The expected value to prove internal consistency was greater than  $.7$  and a test was run for each dimension as explained before to confirm the unidimensionality principle revised in chapter one.

The analysis of the corrected inter-item correlation obtained in the tests run by dimension needs to yield a value greater than  $.3$  to confirm that the items contribute to the dimension they belong to. When the results confirm the contribution of the items to each dimension, it can be said that reliability is demonstrated.

### **3.1.3.3 Construct Validity.**

Both versions of the investment questionnaire were tested using Kolmogorov-Smirnov tests by dimension. To carry out this procedure the values per dimension are added to obtain a score per dimension to work with. An alpha level greater than  $.05$  is necessary to consider there is a normal distribution. Non-normality is determined with  $p < .05$  and this is considered to decide the following tests to run.

It was expressed by Cohen et al. (2018) that construct validity can be addressed by different techniques that prove the correlation when they test the same construct, this is referred to as convergent validity. To prove convergent validity, it is necessary to demonstrate that there is a consistent relation between the elements that was previously assumed. This is the case where the relation was proved using correlation analyses among all the dimensions of the questionnaire (Cohen et al., 2018). Due to the absence of normality of the data, one-tailed Spearman's correlation coefficients were calculated between dimensions (see Tables I1-I2). To interpret the strength of the correlation results the reference of Hinkle et al. (2003) for the social sciences was used taking on account the following ranges presented by the authors:  $-0.3$  to  $+ 0.3$  = negligible;  $+ 0.3$  to  $+ 0.5$  = low;  $+ 0.5$  to  $+ 0.7$  = moderate;  $+ 0.7$  to  $+ 0.9$  high or  $+ 0.9$  to  $1.0$  very high.

### **3.1.4 Attitudes Questionnaire: Pilot Sample**

The attitudes questionnaire was an adaptation of two instruments. One instrument was used by Artamonova (2019) for L2 learners of Spanish and the second by Taylor and Marsden (2014) for foreign language learners in England. The adaptation of the items followed the principles of the measurement theory of unidimensionality, univocality and semantic direction. These instruments used different scales, the former a Likert-scale with seven points and the latter a rating scale with six points (Dörnyei & Taguchi, 2010), so it was necessary to combine the formats and adapt the items following the principles mentioned before. Besides that, the items were translated into Spanish (the L1 of the participants) to avoid misunderstandings while answering the questions.

The new attitudes questionnaire was not submitted to content validation because the original versions of the instruments were validated and statistically tested. Nevertheless, the new version was piloted and subjected to statistical tests to prove stability of answers, internal consistency, and construct validity. The initial version of the questionnaire included 42 items that were distributed across the dimensions of multilingualism ( $n=10$ ), learning of English ( $n=8$ ), the English class ( $n=8$ ), professional benefit ( $n=7$ ), and personal development ( $n=9$ ).

#### **3.1.4.1 Stability of Answers Reliability.**

Two versions of the questionnaire were used to verify the stability of answers. First, the Kolmogorov-Smirnov test was used to check the normal distribution in both versions of the questionnaire expecting an alpha level  $>.05$ . The results showed the absence of a normal distribution in all the items of the dimensions included in the questionnaire ( $p = .001$ ).

As the data set was not normally distributed, non-parametric analyses were used. Kruskal-Wallis tests were run between the two versions (independent samples). This procedure allows to check differences between the versions and when the results are similar between versions, they are considered reliable. No significant difference between versions was found, so the versions were pooled for the following analyses.



#### **3.1.4.2 Internal Consistency Reliability.**

The next step was to check internal consistency using the Cronbach Alpha coefficient and inter-item correlation coefficient. The expected value for the internal consistency is  $>.7$  and for the inter-item correlation should be  $>.3$ . It is important to mention that since the beginning, the items were grouped into dimensions, that is the reason that justifies that the tests were run by dimension. The results for dimension 1 multilingualism including 10 items revealed a reliability coefficient of .518. The items that obtained a corrected item correlation below .3 were 2, 3, 6, and 10. These items were excluded and the new results of the remaining items (1, 4, 5, 7, 8 and 9) yielded a reliability coefficient of .703. Regarding dimension 2 related to the learning of English, the initial coefficient including 8 items was .579. After excluding the items 7, 8, the test was run again, and the result was .772.

For dimension 3 related to the English class the reliability coefficient was .918 so there were no exclusions; in the dimension 4 of professional benefit the initial correlation coefficient was .871. Regarding the last dimension 5 of personal development, the result was a coefficient of .705. When items 8 and 5 were excluded and the second analyses was run, it yielded a coefficient of .843.

As explained before, to check the inter-item correlation, a comparison between items is done. This time the analysis was run by dimension because it was already mentioned that the items were previously grouped. When the correlation analyses were run, the results shown in a table presented the corrected correlation coefficient for every item. The result should be  $>.3$  to retain the item because it contributes to the dimension in the questionnaire.

#### **3.1.4.3 Construct Validity.**

For the attitudes scale questionnaire, it was necessary to check the construct validity. This can be done proving the correlation between dimensions and that the items cluster together. To decide what correlation test to use, the normality of the data needs to be determined. Because the items were previously separated by dimension, the normality tests were run independently.

Because non-normality of the data was found, one-tailed Spearman tests were run using the global scores by dimension. As with the investment questionnaire, the correlation coefficients were computed using the result scores from the addition of the retained items in each dimension to analyze the inter-correlation between dimensions to prove construct validity.

### **3.1.5 Attitudes Questionnaire: Final Study Sample**

#### **3.1.5.1 Stability of Answers Reliability.**

To verify the stability of answers of the attitude questionnaire, even it was checked in the pilot version of the instrument, two versions were used to make comparisons between groups. As theory indicates, the answers in both versions should be similar to claim stability (Field, 2018). A Kolmogorov-Smirnov test was used on an item-by-item bases to find similarities.

As the results of the normality test pointed to a non-normal distribution, once again Kruskal-Wallis tests for independent samples were used to check the differences between the items in both versions of the attitudes questionnaire (see Tables J1-J5).

#### **3.1.5.2 Internal Consistency Reliability.**

When the stability of answers was tested and the remaining items were reliable, Cronbach Alpha tests were run by dimensions to verify the internal consistency of the instrument (see Tables K1-K6). To consider the instrument reliable the expected value of the coefficient should be above .7. This way is possible to confirm that the items cluster together within the dimension.

Following the procedures that were used with the investment questionnaire, the inter-item correlation was verified by dimension expecting a value greater than .3 to consider that the items contribute to the dimension. The decision was based on the corrected correlation coefficient yielded by the tests.

#### **3.1.5.3 Construct Validity.**

Both versions of the attitudes questionnaire were tested using Kolmogorov-Smirnov tests by dimension. To carry out this procedure the values per dimension were

added to obtain a score per dimension to work with. To consider there was a normal distribution, the expected significance value was greater than the alpha level of .05. When this value was not reached, absence of normality was determined, and it influenced in the decisions taken for the following tests.

When the results showed absence of normality, the addition of the scores of the retained items per dimension were used to run one-tailed Spearman tests with each dimension. The results of these tests show the correlation between dimensions, the strength of the correlation and the significance of the correlation (see Table L1).

### **3.1.6 Correlation between Investment and Attitudes**

With the results of the statistical tests of the correlation between dimensions of the questionnaires, there is the opportunity to test the alternative hypothesis, to evaluate the correlation between the investment dimensions results and the attitudes dimensions included in the questionnaires. This correlation would allow to understand if the attitudes of the participants towards compulsory learning of English in their programs, have an influence on the investment they show towards EFL learning. The results made evident what dimensions are related and have more weight in the interaction of attitudes and investment in EFL learning (see Table L2).

## **3.2 Quantitative Data Analysis Results**

### **3.2.1 Investment Questionnaire: Pilot Sample**

#### **3.2.1.1 Content Validity: Pilot Version.**

From the original list of 51 items, six obtained 50% of agreement in congruence with the construct. These items were revised, the wording was changed to make them clearer and more congruent. Some minimum details in other items were checked following the suggestions of the experts.

#### **3.2.1.2 Stability of Answers Reliability.**

The results showed the absence of a normal distribution in all the items of the dimensions included in the questionnaire ( $p = .001$ ). Based on this criterion, the analyses results presented in Appendix C indicate that, in version 1, only the answers to items 3 in

section 1 version 2 (see Table C1), 10 in section 4 version 2 (see Table C4) held a normal distribution. In the analyses by dimension, in version 1, only the answers of dimension 2 regarding necessities achieved normality and, for version 2, the normality principle was met in the sections of motivation (dimension 1), engagement (dimension 3) and agency (dimension 4).

Due to the absence of a consistent normal distribution in the questionnaire data, non-parametric Kruskal-Wallis tests for independent samples showed a difference in the answers of the scale questionnaire for item 14 from dimension 3 (engagement),  $H(1) = 4.87$ ,  $p = .027$  and item 2 from dimension 4 (agency),  $H(1) = 4.49$ ,  $p = .034$ . Since these items exhibited unreliable answer patterns, they were excluded from the final version of the scale questionnaire (see Tables D3 and D4). As there was not a significant difference between questionnaire versions in the other items, the answers from both versions were pooled in the upcoming analyses.

### **3.2.1.3 Internal Consistency Reliability: Pilot Version.**

As the items were constructed and initially grouped into dimensions, independent Cronbach analyses for each dimension were run. The results for dimension 1 revealed a reliability coefficient of .807 and that items 2 and 5 exhibited a corrected item correlation below .3. Based on these results, these items were excluded, and new reliability analyses were run considering only the results from items 1, 3, 4, 6, 7, 8, 9, 10 and 11. The new results yielded a higher reliability coefficient of .881 (see Tables E1).

For dimension 2, the initial Cronbach coefficient was .772. In this dimension only item 3 exhibited a corrected correlation below .3. After the exclusion of this item, the statistical test was rerun including the items 1, 2, 4, 5, 6, 7, 8 and 9. This time, the reliability coefficient for dimension 2 increased to .779 (see Table E2).

Dimension 3 included 20 items. The initial correlation coefficient was .747 and items 7, 9, 10, 11, 12, 17 and 18 showed a corrected correlation coefficient below .3. After the exclusion of these items, the Cronbach analysis was run including the items 1, 2, 3, 4, 5, 6, 8, 13, 15, 16, 19 and 20. The second analysis yielded a higher coefficient of .853 (see Table E3)

The initial analysis for dimension 4 with 10 items exhibited a correlation coefficient of .670 and a correlation coefficient below .3 for items 4, 6 and 10. After the exclusion of these items, the test was run again including the items 1, 3, 5, 7, 8, 9 and 11. The final reliability coefficient for dimension 4 was .729 (see Table E4).

After the internal consistency results and item exclusion procedures, the four sections were considered reliable, as they obtained coefficient values greater than .7 and inter-item correlations above .3. In sum, from the initial number of 51 items that were subject to reliability analyses, 36 items were retained.

#### **3.2.1.4 Construct Validity: Pilot Version.**

In the test of normality of Kolmogorov-Smirnov the analyses by dimension, in version 1, only the answers of dimension 2 regarding necessities achieved normality ( $p = .83$ ) and, for version 2, the normality principle was met in the dimensions of motivation (dimension 1) ( $p = .86$ ), engagement (dimension 3) ( $p = .20$ ) and agency (dimension 4) ( $p = .20$ ). In the end, there was no consistency in the normality results among the dimensions of both versions (see Table C5).

The results of one-tailed Spearman tests that were used due to the skewness of data, revealed a significant correlation between all dimensions ( $p = .001$ ). Based on Hinkle et al. (2003) and the interpretation table of the strength of the correlation coefficient for the social sciences, the analyses of the correlation strength revealed a moderate correlation among motivation, engagement, and agency (see Table F). However, dimension 2, necessity, showed a weak correlation with engagement ( $\rho = .434$ ) and agency ( $\rho = .486$ ), and even weaker correlation with motivation ( $\rho = .179$ ). In sum, a moderate correlation is evident among three of the language learning investment questionnaire dimensions: motivation, engagement, and agency.

### **3.2.2 Investment Questionnaire: Final Study Sample**

#### **3.2.2.1 Stability of Answers Reliability.**

In order to verify the stability of answers, parallel forms of the questionnaire were used to make comparisons between the groups of answers. Similar answers are expected and to prove this, it was necessary to test the normality of data using a Kolmogorov-

Smirnov test on an item-by item basis. The results showed non-normality in the distribution in all the items of the dimensions of the instrument ( $p = .001$ ).

Due to the absence of normal distribution of the data and collection with two versions of the questionnaire, the option to continue was a Kruskal-Wallis test to evaluate the items of independent samples and find the differences in the answers (see Tables G1-G5). The tests were run excluding the items identified in the pilot version of the questionnaire with unreliable patterns of answers and were excluded from the final version. They were item 14 from dimension 3 and item 2 from dimension 4. The results showed differences in the following items. For dimension 1 (motivation) item 7  $H(1) = 3.86$ ,  $p = .049$ ; item 8  $H(1) = 4.61$ ,  $p = .03$  and item 9  $H(1) = 5.80$ ,  $p = .01$  (see Table 10.1). For dimension 4 (agency) item 8  $H(1) = 4.75$ ,  $p = .02$  and item 10  $H(1) = 5.21$ ,  $p = .02$  (see Table 10.4). Finally, five items out of 49 showed differences, what can be considered not a significant difference between the questionnaire versions.

#### **3.2.2.2 Internal Consistency Reliability.**

With the items grouped in dimensions, independent analyses were run per dimension using the remaining items after the analyses in the pilot version. The results for dimension 1 yielded a reliability coefficient of .864, for dimension 2 the coefficient was .859. In the case of dimension 3 it exhibited a coefficient of .900 and for dimension 4 the result was .772 (see Tables H1-H4). In the end, the four dimensions showed a correlation coefficient above .7 so they can be considered reliable.

All the results obtained by dimension shown in tables for the corrected item-total correlation were above .3. These results allow to consider all the dimensions of the questionnaire as reliable because all the items were contributing to the dimensions in the questionnaire.

#### **3.2.2.3 Construct Validity.**

When the normality by dimension was evaluated, the conclusion was that there was no consistency in the normality results of the dimensions included in both versions of the questionnaire. Normality was found in the dimensions of motivation ( $p = .200$ ) in version 2 and agency ( $p = .200$ ) in version 1.

Using Hinkle et al. (2003) reference for the social sciences to interpret the obtained values regarding the strength of the correlation between dimensions, the following table was used: -0.3 to + 0.3 = negligible; + 0.3 to + 0.5 = low; + 0.5 to + 0.7 = moderate; + 0.7 to + 0.9 high or + 0.9 to 1.0 very high. The results make evident a low correlation between agency and engagement ( $\rho = .339, p = .003$ ) and agency and motivation ( $\rho = .408, p = .001$ ). The dimension of necessities shows low correlation with the other three dimensions, necessities and agency ( $\rho = .386, p = .001$ ); necessities and engagement ( $\rho = .488, p = .001$ ) and necessities and motivation ( $\rho = .422, p = .001$ ). The only moderate correlation is between motivation and engagement ( $\rho = .550, p = .001$ ) (see Table I1).

### **3.2.3 Attitudes Questionnaire: Pilot Sample**

#### **3.2.3.1 Stability of Answers Reliability.**

After running the Kolmogorov-Smirnov normality test, the results showed the absence of a normal distribution in all the items of the dimensions included in the attitude questionnaire ( $p = .001$ ). These results included both versions of the questionnaire. Based on these results of non-normality of the data, it was decided to use a non-parametric test to continue. Due to the characteristics of the data (ordinal) and that they were obtained from independent samples, the option to check the stability of answers was a Kruskal-Wallis test.

As mentioned before, non-parametric analyses were used due to the absence of a normal distribution in all the items of all the dimensions included in the questionnaire ( $p = .001$ ). The latter pointed to the use of Kruskal-Wallis tests between the two versions of the questionnaire (independent samples) to check the differences between the versions. The results showed unreliable answers in dimension 5, professional benefit, from the item 5,  $H(1) = 5.90, p = .015$  consequently it was excluded from the final version of the questionnaire. No significant difference between versions was found, so the versions were pooled for the following analyses.

### 3.2.3.2 Internal Consistency Reliability.

The results of internal consistency were obtained running the tests by dimension. The results for dimension 1, multilingualism, including 10 items, revealed a reliability coefficient of .518. The items that obtained a corrected item correlation below .3 were excluded (items 2, 3, 6 and 10) and the new results of the remaining items (1, 4, 5, 7, 8 and 9) yielded a reliability coefficient of .703. Regarding dimension 2 related to the learning of English, the initial coefficient including eight items was .579. After item exclusion of the items 7 and 8, the test was run again, and the result was .772.

For dimension 3 related to the English class, the reliability coefficient for the eight items was .918 so there was no exclusion; in the dimension 4 of professional benefit, for the seven items the initial correlation coefficient was .871. Regarding the last dimension 5 of personal development that included nine items, the result was a coefficient of .705. When necessary, items were excluded, the analysis was rerun and it yielded a coefficient of .843. The initial number of items was 42 and after the correlation analyses the final number of items was as follows: for dimension 1, multilingualism, 5 items; for dimension 2, learning of English, 6 items; for dimension 3, English class, 8 items; for dimension 4, professional benefit, 7 items were retained; and for dimension 5, personal development, 7 items. After the exclusion of the items, a total of 34 items were retained in the attitudes questionnaire.

After running the Cronbach Alpha analyses to evaluate the internal consistency, the corrected item-total correlation value considered to retain the items was .3. After the exclusion procedures carried out during the internal consistency revision, the five sections were considered reliable, as they obtained coefficient values greater than .7 and inter-item correlations above .3.

### 3.2.3.3 Construct Validity.

In the test of normality of Kolmogorov-Smirnov the analyses per dimension, in version 1, the answers that achieved normality were dimension 1 regarding multilingualism ( $p = .20$ ), and dimension 4 about professional benefit ( $p = .07$ ). In the case of version 2, the normality principle was met in dimension 1 (multilingualism) ( $p = .20$ ), dimension 2 (learning English) ( $p = .20$ ), dimension 3 (English class) ( $p = .20$ ) and



dimension 5 (personal development) ( $p = .20$ ). In the end, there was no consistency in the normality results among the dimensions of both versions.

The Spearman's correlation analyses were run by dimensions. The results showed the correlations were not significant in most of the cases (see Table 3.3). Regarding the strength, they revealed a negligible correlation between multilingualism and professional benefit ( $\rho = .279, p = .03$ ) and personal development ( $\rho = .266, p = .04$ ); or low with English class ( $\rho = .360, p = .01$ ) and learning English dimensions ( $\rho = .434, p = .001$ ). There is a moderate correlation between learning English and other three dimensions, English class ( $\rho = .699, p = .001$ ) professional benefit ( $\rho = .587, p = .001$ ) and personal development ( $\rho = .415, p = .004$ ).

**Table 3.3**  
*Correlations between dimensions*

Spearman's rho		Multi lingualism	Learning English	English class	Professional Benefit	Personal Development
Multi lingualism	Correlation Coefficient	1.000	.434*	.360*	.279*	.266*
	Sig. (1- tailed)	.	.002	.010	.039	.047
	N	41	41	41	41	41
Learning English	Correlation Coefficient	.434**	1.000	.699**	.587**	.415**
	Sig. (1- tailed)	.002	.	.000	.000	.004
	N	41	41	41	41	41
English class	Correlation Coefficient	.360*	.699**	1.000	.475**	.361*
	Sig. (1- tailed)	.010	.000	.	.001	.010
	N	41	41	41	41	41

**Table 3.3** Continued

Spearman's rho		Multi lingualism	Learning English	English class	Professional Benefit	Personal Development
Professional Benefit	Correlation Coefficient	.279*	.587**	.475**	1.000	.581**
	Sig. (1- tailed)	.039	.000	.001	.	.000
	N	41	41	41	41	41
Personal Development	Correlation Coefficient	.266*	.415**	.361*	.581**	1.000
	Sig. (1- tailed)	.047	.004	.010	.000	.
	N	41	41	41	41	41

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

### 3.2.4 Attitudes Questionnaire: Final Study Sample

#### 3.2.4.1 Stability of Answers Reliability.

When the results of the pilot were obtained. The final questionnaire was distributed to the final sample. In this case, the Kolmogorov-Smirnov tests revealed the absence of normality in the distribution of the items of the different dimensions ( $p = .001$ ) including both versions of the attitudes questionnaire. This indicated that the following tests should be non-parametric.

Kruskal-Wallis tests for independent samples were used to check the differences between the versions of the attitudes questionnaire and an expected  $p$  value  $> .05$  would indicate that both versions have similar results to declare no significant differences. The results showed unreliable answers in different dimensions as follows. In dimension 2, English learning, items 1  $H(1) = 3.91$ ,  $p = .04$  and item 2  $H(1) = 4.91$ ,  $p = .02$ ; in dimension 3, items English classes, item 1  $H(1) = 4.23$ ,  $p = .04$ , item 4  $H(1) = 5.31$ ,  $p = .02$  and item 5  $H(1) = 5.90$ ,  $p = .01$ ; in dimension 4, professional benefit, item 5  $H(1) = 5.09$ ,  $p = .02$  and item 7  $H(1) = 8.98$ ,  $p = .003$ ; and in dimension 5, personal development, items 3  $H(1)$

= 4.95,  $p = .02$  and item 8  $H(1) = 8.52$ ,  $p = .004$ . The nine items showed different results from those of the pilot version of the questionnaire analyses (see Tables J1-J5).

#### **3.2.4.2 Internal Consistency Reliability.**

Following the process mentioned before, to check the internal consistency of the questionnaire, the final version of the questionnaire was used excluding the items indicated in the analyses of the pilot version, to obtain stability of answers avoiding differences between the two versions of the instrument. Cronbach Alpha tests were run by dimension as the items were previously grouped (see Tables K1-K5). The results for the final sample of the attitude questionnaire for dimension 1, multilingualism, showed a reliability coefficient of .586. After excluding item 10 that obtained a corrected item correlation below .3, the second time the test yielded a reliability coefficient of .711. In the case of dimension 2, learning English, it showed a low coefficient of .490. After excluding items 7 and 8, the reliability coefficient yielded was .620. Regarding dimension 3, English class, revealed a reliability coefficient of .818; in the case of dimension 4, professional benefit, the result was a coefficient of .837. For the last dimension 5, personal development, the test yielded a coefficient of .670, but after excluding item 4, the analysis was rerun, and it yielded a coefficient of .785. The overall reliability coefficient by dimension was .734, taking into account the 5 dimensions (see Table K6). The expected value for the inter-item correlation was of .3. The items listed above did not achieved the expected value and were excluded to improve the reliability coefficient for the dimensions where was needed.

#### **3.2.4.3 Construct Validity.**

To test the normality per dimension, a Kolmogorov-Smirnov test was used grouping the answers per dimension. To do this, the results per dimension were added to obtain a value for each dimension. Normality was achieved in dimension 1 regarding multilingualism in both versions ( $p = .20$ ), dimension 2, learning English version 2 ( $p = .20$ ), and dimension 5, personal development in version 1 ( $p = .20$ ). As the results indicated, it is a lower bound of the true significance. In the end, no consistency on the normality results was found, so it can be interpreted as absence of normality in general in both versions of the instrument.

After testing normality of data, Spearman's correlation analyses were run by dimension. The results of the tests indicated there was no significance in most cases. To evaluate the strength of the correlation, a negligible correlation was found between multilingualism and English class ( $\rho = .113, p = .182$ ); multilingualism and learning English ( $\rho = .227, p = .03$ ); a low correlation between multilingualism and personal development ( $\rho = .342, p = .002$ ), learning English and personal development ( $\rho = .379, p = .001$ ) and between learning English and English class ( $\rho = .423, p = .001$ ). Finally, a moderate correlation was found between English class and personal development ( $\rho = .576, p = .001$ ) and professional benefit and personal development ( $\rho = .572, p = .001$ ) (see Table L1).

### **3.2.5 Correlation Between Investment and Attitudes**

If the correlation of the dimensions of the attitudes and the investment questionnaires is examined in the pilot versions, the results are as follows; a significance of the correlation between all the dimensions is at the 0.01 and 0.05 level. Regarding the strength of the correlation between dimensions of both questionnaires, it is interesting to mention there is a low correlation between learning English and motivation ( $\rho = .425, p = .003$ ), engagement ( $\rho = .495, p = .001$ ) and agency ( $\rho = .416, p = .003$ ). At the same time, the correlation is moderate between the English class (attitudes questionnaire) and the following dimensions of the investment questionnaire, motivation ( $\rho = .714, p = .001$ ), engagement ( $\rho = .686, p = .001$ ) and agency ( $\rho = .603, p = .001$ ). Nevertheless, the correlation of the attitudes dimensions of professional benefit and personal development with the dimensions of investment shows low values.

The results for the final sample of the study comparing the correlation between both instruments are similar. Some notable changes regarding the strength of the correlation are identified in relation to learning English which decreased to negligible values when related to motivation ( $\rho = .278, p = .01$ ) and engagement ( $\rho = .292, p = .009$ ). In relation to a moderate correlation in the final sample the following correlations can be found, between motivation and engagement ( $\rho = .550, p = .001$ ); motivation and English class ( $\rho = .704, p = .001$ ) and personal benefits and necessities ( $\rho = .653,$

$p = .001$ ). The rest of the correlations continue with low values between .3 and .5 (see Table L2).

**Table 3.4**  
*Correlations of Investment and Attitudes Dimensions*

		Motivation	Necessities	Engagement	Agency	Multilingualism	Learning English	English class	Professional benefit	Personal development
Motivation	Pearson Correlation	1	.468*	.612**	.560**	.087	.307**	.766**	.426**	.504**
	Sig. (1-tailed)		.000	.000	.000	.244	.006	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Necessities	Pearson Correlation	.468*	1	.481**	.453**	.273*	.387**	.421**	.523**	.451**
	Sig. (1-tailed)	.000		.000	.000	.013	.001	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Engagement	Pearson Correlation	.612*	.481*	1	.424**	.051	.256*	.497**	.419**	.428**
	Sig. (1-tailed)	.000	.000		.000	.342	.019	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Agency	Pearson Correlation	.560*	.453*	.424**	1	.267*	.373**	.579**	.310**	.475**
	Sig. (1-tailed)	.000	.000	.000		.015	.001	.000	.006	.000
	N	66	66	66	66	66	66	66	66	66
Multilingualism	Pearson Correlation	.087	.273*	.051	.267*	1	.239*	.091	.433**	.363**
	Sig. (1-tailed)	.244	.013	.342	.015		.027	.234	.000	.001
	N	66	66	66	66	66	66	66	66	66

**Table 3.4** Continued

		Motiv ation	Nec essit ies	En ga ge ment	Ag enc y	Mult iling uali sm	Learn ing Engli sh	En glish class	Profess ional benefit	Per son al dev elop ment
Learning English	Pearson Correlat ion	.307*	.387*	.25 6*	.37 3**	.239 *	1	.39 4**	.412**	.373 **
	Sig. (1- tailed)	.006	.001	.01 9	.00 1	.027		.00 1	.000	.001
	N	66	66	66	66	66	66	66	66	66
English class	Pearson Correlat ion	.766*	.421*	.49 7**	.57 9**	.091	.394**	1	.437**	.616 **
	Sig. (1- tailed)	.000	.000	.00 0	.00 0	.234	.001		.000	.000
	N	66	66	66	66	66	66	66	66	66
Profession al benefit	Pearson Correlat ion	.426*	.523*	.41 9**	.31 0**	.433 **	.412**	.43 7**	1	.478 **
	Sig. (1- tailed)	.000	.000	.00 0	.00 6	.000	.000	.00 0		.000
	N	66	66	66	66	66	66	66	66	66
Personal developme nt	Pearson Correlat ion	.504*	.451*	.42 8**	.47 5**	.363 **	.373**	.61 6**	.478**	1
	Sig. (1- tailed)	.000	.000	.00 0	.00 0	.001	.001	.00 0	.000	
	N	66	66	66	66	66	66	66	66	66

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

As mentioned at the beginning of this thesis the second research objective was to explore the interaction of motivation, necessity, engagement, and agency among higher education students whose future profession is outside of the field of English language teaching (see Tables B4-B7). It results interesting that in the dimension regarding

motivation, the 92.69% of the participants revealed they consider that it is worth investing time and money to learn English. The results revealed that 87.8% agreed on the fact that it is an effort they are willing to do and 95.12% feel proud when they are capable to finish the tasks, but only the 51.22% reported they enjoy the time they spend learning English (see Table B4). In relation to the necessities the participants report towards learning English, the largest numbers are for communication and to obtain a scholarship (82.93% and 80.49% of total agreement, respectively) followed by having job opportunities abroad, to interact with people from other cultures and to increase the possibilities to get a well-paid job.

Although higher education students are highly exposed to technology, only 36.59% strongly agree that English is necessary to use technology and 65.85% acknowledge that it is necessary to have access to updated information related to their studies (see Table B5).

As for learning engagement, pooling the positive answers that show partial or total agreement, a high level of engagement can be noticed when the participants report that attending classes (92.68%), having the materials for class (90.25%), paying attention (100%), taking notes (90.24%) and working at home (95.12%) are important to succeed. Notwithstanding, 78.05% report they make an effort to speak in English even they do not feel confident and 97.56% make an effort to understand others (see Table B6). With reference to the fourth dimension of investment, agency, 73.17% are convinced that they can improve their learning if they get involved in the process and 58.54% recognize they feel more confident when they can communicate using English. What they prefer to do by themselves to increase their exposure to the target language is watching movies (73.17%) and listening to music (78.05%). However, 85.37% do not attend English classes in other institutions, 43.90% do not use mobile phones to improve or practice what they have learned and 85.37% answered they are not interested in online interaction with videogame players to practice their English (see Table B7). In sum, the results show a low agency of these participants to improve their learning.

### **3.2.6 Verification of the Alternative Hypothesis**

The hypothesis presented in chapter 1 expressed that the attitudes towards compulsory EFL learning, influence the level of EFL learning investment among higher education students from programs which are not related to the EFL profession.

During the statistical process the correlation among the different dimensions that impact on language learning investment of higher education students was examined. This relationship was explored determining correlation coefficients between dimensions using the Spearman's correlation coefficient ( $r_s$ ). In the process, it was necessary to start evaluating the level of significance of the correlation through the use of the coefficient alpha expressed in a  $p$  value  $> .05$  as initial reference. If the correlation was significant, then the next important piece of information was the strength of the correlation. To interpret the obtained correlation values Hinkle et al. (2003) reference table for the social sciences was used as follows:  $-0.3$  to  $+0.3$  = negligible;  $+0.3$  to  $+0.5$  = low;  $+0.5$  to  $+0.7$  = moderate;  $+0.7$  to  $+0.9$  high or  $+0.9$  to  $1.0$  very high.

The results of the Spearman's test show that the strength of the correlation between the dimensions of the attitudes and investment questionnaires vary from weak to moderate (see Table L2). The results also show differences between the pilot and final sample results where the participants were at a different stage in their language learning process. Thus, it can be said that the attitudes the students have towards compulsory EFL learning, influence the level of EFL learning investment among higher education students from programs which are not related to the EFL profession.

## **3.3 Qualitative Results: Interview**

### **3.3.1 Coding Procedures**

As it was explained in a previous section, thematic analysis was used. After finishing the interviews, the recordings were transcribed and read several times to get familiarized with the information. Coding can be concept-driven, when based on literature the researcher determines the codes in advance; or data-driven, when codes are created during the reading of the transcripts (Brinkmann & Kvale, 2015). During this reading, the first stage or pre-coding was initiated using a concept-driven procedure because codes

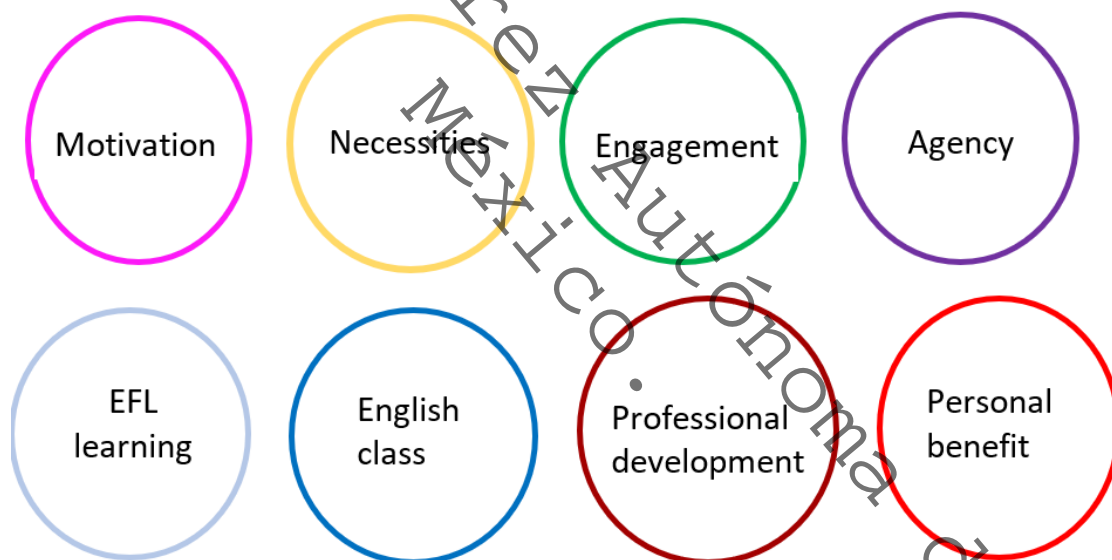


were related to the concepts used in the questionnaires answered by the participants. Interesting things, and information related to the questions were underlined. Then, coincidences or similarities were highlighted to help the identification.

During the first coding cycle the reading stage was repeated several times going back and forth; comments and labels were used to group the information. As there were groups or labels designed by the dimensions of the quantitative instruments (concept driven), they were used to guide the organization of the pieces of information. Color labels were used to make easier the visual identification of the themes (see Figure 3.1). The notes helped to identify the topics.

**Figure 3.1**

*First Cycle. Color Theme Identification*



A table was used to organize the information using the exact words of the participants in order not to change the meaning or sense of the comments and to avoid subjective predispositions or personal points of view of the researcher. Comparisons were made to find coincidences and explanations that facilitate grouping codes and categories organization. To concentrate and process the information, themes (categories) and subthemes (subcategories) were identified and labeled. The following table shows the

organization of the themes using a deductive procedure based on previous literature review (see Table 3.5).

**Table 3.5**

*Qualitative Coding process. Categories and subcategories*

	<b>Theme</b>	<b>Subtheme</b>
Investment	Motivation	Satisfaction
		Insecurities
		Criticism
	Necessity	Frustration
		Entrepreneurship
		Communication
		Graduation requirement
	Engagement	Job
		Traveling
		Likes
Interest		
Effort		
Agency	Enjoyment	
	Distraction	
	Extra activities	
Attitudes	EFL learning	Personal choice
		Obligatory
		Previous experience
	English class	Usefulness
		Valuable
		Learning strategies
		Teaching strategies
	Personal development	Technology
		Personal achievements
		Scholarships
Professional benefit	Lack of information	
	Access new information	
	Opportunities	
	Job requirements	
	Postgraduate studies	
	Working abroad	
Short vision		

Using Atlas.ti software version 23 each theme was assigned a color, as mentioned before, to facilitate the identification of themes and subthemes as shown in Figure 3.1. Using the software it was possible to get a better view using a word cloud that shows the terms that were used more frequently (see Figure 3.2).

**Figure 3.2**

*Cloud of subthemes using color codes*



**Table 3.8**

*First Coding Cycle*

Code Groups	Code
Agency	<ul style="list-style-type: none"> <li>● Extra activities, agency</li> <li>● Optional studies</li> <li>● Personal choice, agency</li> </ul>
EFL learning	<ul style="list-style-type: none"> <li>● Obligatory, compulsory</li> <li>● Previous experience</li> <li>● Usefulness</li> <li>● Valuable</li> </ul>
Engagement	<ul style="list-style-type: none"> <li>● Distraction</li> <li>● Effort</li> <li>● Enjoyment</li> <li>● Interest</li> <li>● Likes</li> </ul>

**Table 3.8** Continued

Code Groups	Code
English class	<ul style="list-style-type: none"> <li>● Learning strategies</li> <li>● Materials</li> <li>● Peer help</li> <li>● Teaching strategies</li> <li>● Technology</li> </ul>
Motivation	<ul style="list-style-type: none"> <li>● Criticism</li> <li>● Entrepreneurship</li> <li>● Frustration</li> <li>● Insecurities</li> <li>● Lack of confidence</li> <li>● Satisfaction</li> </ul>
Necessities	<ul style="list-style-type: none"> <li>● Communication</li> <li>● Graduation requirements</li> <li>● Job requirement</li> <li>● Travelling</li> <li>● Job</li> </ul>
Personal development	<ul style="list-style-type: none"> <li>● Lack of information</li> <li>● Personal achievements</li> <li>● Scholarship</li> <li>● Access new info</li> <li>● Opportunities</li> </ul>
Professional benefit	<ul style="list-style-type: none"> <li>● Postgraduate studies</li> <li>● Short vision</li> <li>● Working abroad</li> </ul>

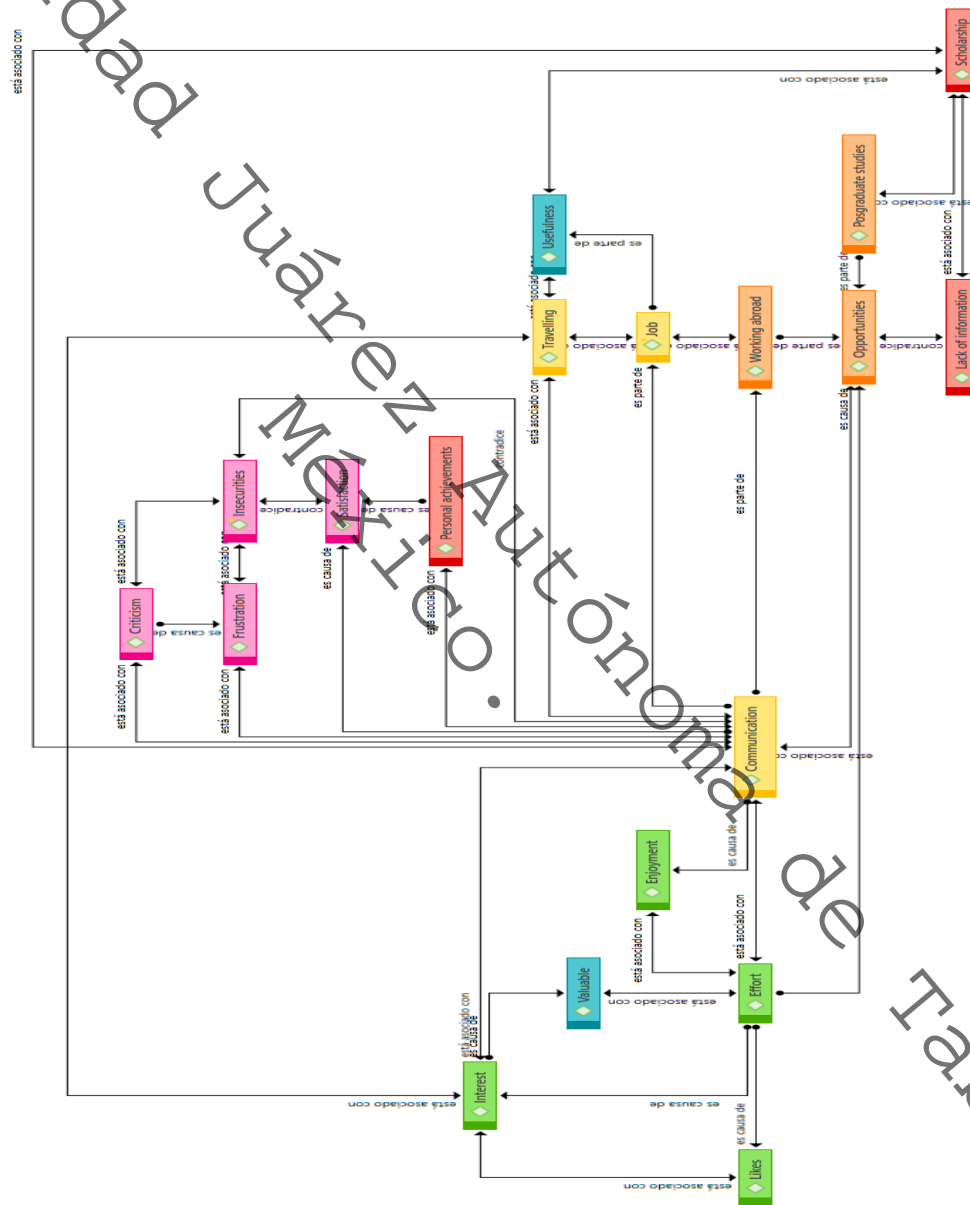
For the second coding cycle, the purpose was to reorganize data merging, reassigning, or deleting subthemes that were not coherently related to others. As mentioned before, Nowell et al. (2017) explain, that during the process there might be the necessity of recoding data or deleting codes if they are not found substantially related to others. This was the case of entrepreneurship that was mentioned only once. In the case of other two codes (materials and peer help) were merged with learning strategies as the participants referred to activities they used to do to facilitate their learning. The same situation occurred with insecurities and lack of confidence and with job and job requirements. Finally, eight themes and 32 subthemes are listed (see Table 3.8).

During the process, different associations between themes were identified in the answers given by the participants. For instance, among necessities, engagement,

motivation, personal development and professional benefit dimensions. Regarding the necessities dimension, communication was related with other subthemes from different dimensions such as effort, enjoyment, likes and interest that correspond to the dimension of engagement (see Figure 3.3)

**Figure 3.3**

*Associations among subthemes*



On the upper middle area, the subthemes are related to motivation in a positive or negative way including satisfaction, frustration, insecurities, and fear to criticism that were mentioned by the participants when they referred to their speaking skills or when they described the activities carried out in the English classroom. Learners reported they prefer not to participate to avoid being exposed to peer criticism. On the lower right corner there is a combination of necessities, professional benefit and personal development subthemes that show different relationships. Just to mention some examples, they can be part of, associated to or contrast with other subtheme. In the case of professional benefit, the effort invested in learning English develops the learner's communicative skills that bring opportunities. As part of these opportunities, further postgraduate studies or working abroad can be mentioned. Here is worth to mention the contrast that represents the lack of information some learners showed regarding the opportunities they can have access to, for instance, applying for scholarships. Another example can be regarding the usefulness given to EFL learning that is associated with activities such as traveling or getting a job where the language is required.

### **3.3.2 Analyses & Results**

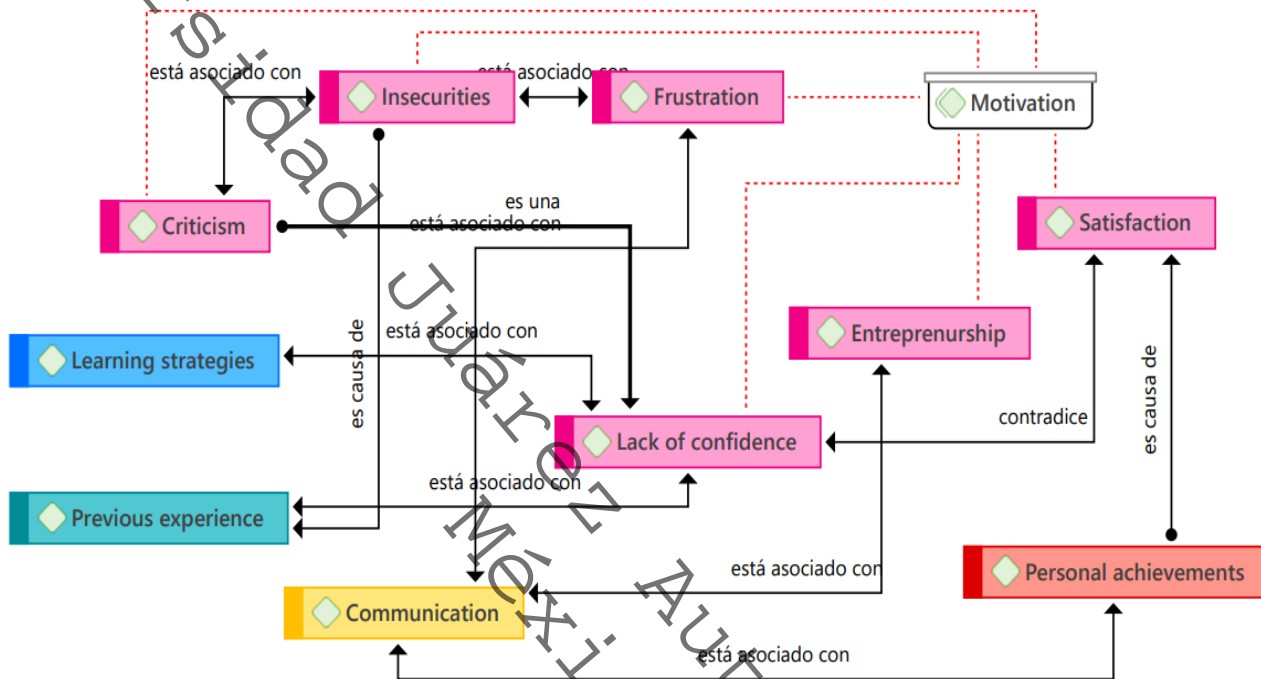
In general, the group of participants in this study recognized that learning languages may open the door to new opportunities. Communicative and social relationships may take place and this communication might be held to fulfill personal needs in social or tourism encounters or to satisfy work necessities such as talking to people from other countries, making transactions or having access to updated information about a topic. In Mexico, English is required in many places to get a job, moreover, for people who had the possibility to complete a higher education program. However, this does not ensure that the student is able to identify the usefulness of English for a good performance in his or her profession.

The qualitative component of the study allowed the participants to expand and clarify the answers obtained with the scale questionnaires. With the interviews was possible to identify the associations between subthemes as mentioned before. The findings are presented by dimension. To protect anonymity, pseudonyms were used when submitting comments.

### 3.3.2.1 Motivation.

Figure 3.4

Motivation Dimension and Associated Codes



When the participants of the interviews in this study were asked about their previous experience learning English, they expressed that many teachers were not qualified to teach English. In turn, the following participants, whose experiences exemplify different limitations, affirm that they did not have the opportunity to receive English instruction or the teacher's training was limited as Dulce and Alma indicate respectively.

*No llevé inglés en la primaria. Pues la maestra que nos daba clase de español, ella misma nos impartía inglés, pero realmente ella no sabía. Y pues, dejó a un lado el libro.*

*I didn't take English class in elementary school. Well, the Spanish teacher was supposed to teach us English too, but she really didn't know English. So, she left the book aside (Dulce, age 18).*

*La escuela en la que estuve fue pública y pues la maestra no le ponía tanto interés, solamente nos mandaba hacer diccionarios de inglés me tocó hacer un diccionario tremendo de todas las letras.*

*The school I attended was a public school and the teacher didn't put much interest in it, she only asked us to make English dictionaries, I had to make a tremendous dictionary of all the letters (Alma, age 18).*

As we can see, it seems that in both cases, the previous experience was not satisfactory or meaningful to the learners, not to mention that the objectives of the new educational model or the national English program were not met in any way. Another participant, Gabriela describes the experience in middle and high school, and it is no more encouraging.

*En secundaria la maestra no enseñaba casi nada. No veíamos tanto el inglés, hacíamos otras actividades, pero no veíamos tanto el inglés. En prepa, tomé clases particulares.*

*In middle school, the teacher taught almost nothing. We didn't study English so much, we did other activities, but we didn't use English so much. In high school I attended private classes (Gabriela, age 17).*

One idea that may come out of the previous excerpts regarding the participants' contributions is that their middle school teachers did not have the knowledge to teach English or were not able to work with the materials. These opinions might mean that it is not the teachers who refuse to work, but it can be the lack of the necessary language competencies. What can be inferred according to the answers of the participants is that in public schools there are not the necessary skillful teachers to teach English as a foreign language to the population in different contexts. However, when learners have the opportunity to study in private institutions their opportunities to learn English increase as Alma's comment illustrates.

*Hasta que entré a una preparatoria particular empecé a tomar clases; si me sirvieron mucho, porque cuando presenté mi examen de admisión, más en áreas de inglés salí muchísimo más alta que las otras personas.*



*Until I entered a private high school, I started taking classes; they were very useful to me, because when I took my entrance exam, especially in English, I got much higher results than the other candidates (Alma, age 18).*

Learners' motivation is impacted by positive factors, such as the ability to communicate or self-contentment when learners are able to finish a task, or negative factors such as individual preconceptions regarding one's abilities or peer criticism. These factors cause satisfaction or promote insecurities in learners. However, motivation is not necessarily related to public or private education. There could be personal difficulties the learners have to face that might be related to competencies, personal attitudes or even contextual factors that impact language learning, as it is shown by Bety in the next excerpt:

*A pesar de que he llevado inglés desde toda mi vida, porque pues, estudié en escuelas privadas, a mí en lo personal se me dificulta hablarlo.*

*Even though I have been learning English all my life because I studied in private schools, I personally find it difficult to speak (Bety, age 21).*

The following is an opposite case where Felipe, another participant, reports satisfaction when he is able to complete the assigned activities on his own.

*Me siento muy bien y me siento alegre, me siento feliz de poder lograrlo ... como que no obtener ayuda de nadie más y hacerlo por mí mismo.*

*I feel great and I feel joyful, I feel happy that I can do it...like not getting help from anyone else and doing it by myself (Felipe, age 20).*

*The difficulties learners face impact their decisions regarding the time and effort they decide to invest to continue learning the language. When they are able to overcome difficulties, they are satisfied with the results and willing to continue learning.*



Other situations mentioned are the ones related to job requirements when working for the private sector as Bety points out:

*Puedo irme a otro lado trabajando de maestra de educación especial fuera del país, si, pues, eso sí me ayudaría bastante.*

*I can go somewhere else to work as a special education teacher outside the country, yes, well, that would help me a lot (Bety, age 21).*

Just a few participants are aware and commented regarding graduation requirements. Melissa expressed concern about that point when she answered:

*Bueno, nuestros compañeros que están escribiendo la tesis tienen este, tienen que escribir el "abstract", algo así en inglés y yo siento que ahí me ayudaría mucho porque todavía estoy empezando a escribir.*

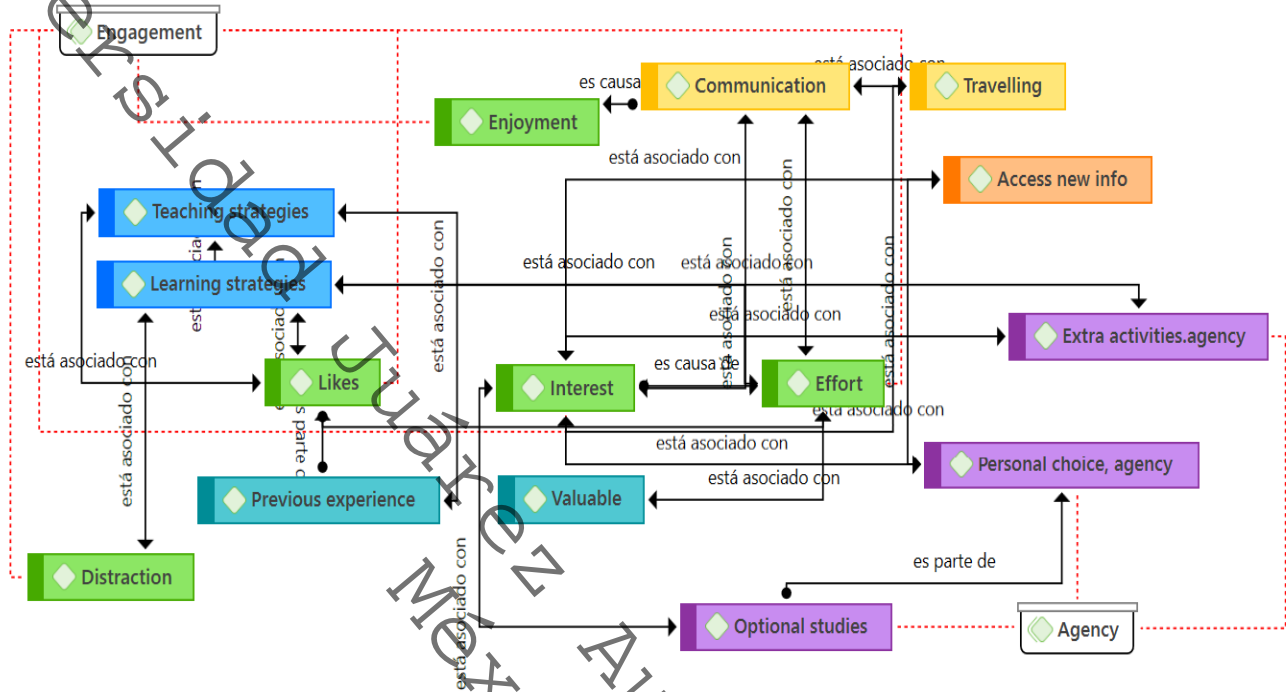
*Well, our colleagues who are writing the thesis have, they have to write the abstract, something like that in English, and I feel that it would help me a lot because I am still starting to write (Melissa, age 18).*

As this group of higher education students who are pre-service teachers for learners with special needs consider it would be difficult to teach English to the learners they will work with, they do not identify professional necessities to learn English themselves. An important point to note, however, is the lack of information they show at the beginning of their studies regarding educational reforms that affect them directly. Furthermore, it seems that some participants have not clear the educational practices based on the reforms and the stipulated generalist teachers' responsibilities to teach English in their classrooms. Also, these student participants lack the knowledge regarding the language in which updated academic information that they need for their professional development is usually published. Additionally, they ignore that they need a certification in English for scholarships and mobility programs that are available for them to apply. Moreover, they seem to dismiss the fact that they can enroll in online courses for their professional development if they cannot afford the expenses of a mobility program.

### 3.3.2.3 Engagement and Agency.

Figure 3.6

Engagement and Agency Dimensions and Associated Codes



As explained in a previous chapter, it is crucial to understand that engagement is directly tied to active participation when the learner gets involved in doing the assigned class activities and interacts with peers. Engagement entails interest, effort and an important fact is that the learner likes and enjoys, at least in a certain way, what is being done. It can be inferred from the obtained answers that the previous experience as EFL learners left a mark that affects the way they think. On the one hand, they might think that English is not necessary or on the other hand that they cannot learn it. Some students seem to like English, or they are aware that it is necessary or useful. Nevertheless, they find it difficult to learn, mostly to speak it as shown in the following comments made by Dulce, Irma and Janet.

Dulce

*El inglés a mí se me dificulta mucho y pues hablarlo casi no puedo. No puedo pronunciar bien las palabras.*

*English is very difficult for me, and I can hardly speak it. I can't pronounce the words well (Dulce, age 18).*

Irma

*Para hablarlo necesitaría más práctica, porque es lo que se me dificulta y a veces me desespero, porque pues siento que no se me entiende.*

*Well, to speak it I would need more practice, because that's what I find difficult and sometimes I get desperate, because I feel that others can't understand me (Irma, age 19).*

Janet

*Siempre he tenido dificultades con el inglés desde que lo vi en secundaria. Nunca ha sido una de mis materias favoritas.*

*I have always had difficulties with English since I studied it in high school. It has never been one of my favorite subjects (Janet, age 18).*

Additionally, lack of personal initiative can be noticed as they do not show a lot of interest in promoting their own learning trying to find activities on their own to do outside the classroom, to improve their level of proficiency investing more time and effort. The most common thing they do is listening to music and looking up the lyrics to find the meaning of some words and as they expressed, to learn pronunciation. However, some of the participants reported they take notes and review or practice at home what they worked in class with the teacher as it is explained by Carolina

*Transcribo mis apuntes, practico ejercicios, escucho música en inglés. Yo escucho música y la repito, la repito y le pongo los subtítulos. Para saber cómo se pronuncia, para saber cómo se escribe, más que nada la pronunciación*

*I transcribe my notes, practice exercises, listen to music in English. I listen to music, and I repeat it, I repeat it and I put the subtitles on it. To know how to pronounce it, to know how to write it, more than anything else the pronunciation (Carolina, age 19).*

Others such as Elena, try to watch movies or TV series using subtitles to understand the dialogues, improve pronunciation and identify vocabulary they already know as she pointed out:

*Logro identificar palabras en las canciones y yo creo que me ayuda con la pronunciación. También a veces pongo los subtítulos de en las películas en inglés.*

*I manage to identify words in songs, and I think it helps me with pronunciation. I also sometimes put the subtitles in movies in English (Elena, age 19).*

Nevertheless, most of the participants do not report interest in attending other English courses, getting involved in conversations with other people not even using video games or applications in English to enhance their learning in their free time, as Bety explains in the next excerpt:

*Al menos de mi parte no es así y pues no busco nada, pero le digo que a veces sí me aparecen como noticias o algo en inglés y a veces, si las intento leer lo más que, lo más que yo pueda, ya cuando ya no puedo, pues ya lo quito.*

*At least it is not like that, I don't look for anything, but sometimes some things such as news or something in English pop up and sometimes, I try to read them as much as I can, when I can't understand, I move to another thing (Bety, age 21).*

A second outstanding point is that teacher trainers who are not related to language teaching in the BA, do not promote the use of English in their classes by giving the student-teachers (pre-service teachers) updated materials to read in English. Fact that does not contribute to make them aware of the necessity of learning English for their future professional development.

An interesting recommendation would be to work with the school staff and teacher educators to share the results of this research. A positive action would be to design activities to promote the use of updated academic materials to increase the pre-service teachers' interest in learning English. This proposal could help learners to become more, aware of the benefits for their professional development. A second action that can be done is to make evident the need of English to have access to up to date information. In the different areas of studies, they can also evidence the possibilities of teaching English to

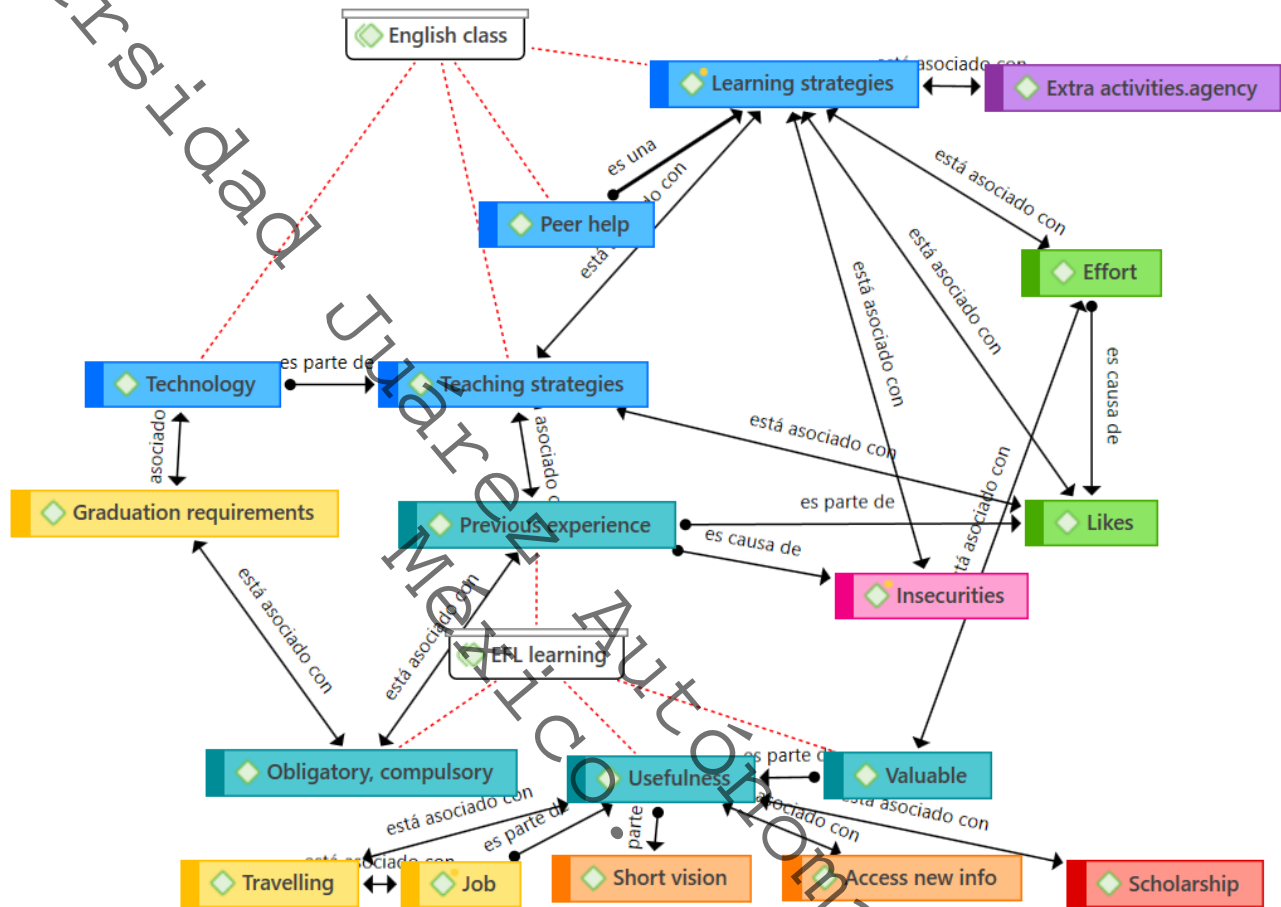
learners with different exceptionalities (special needs), because depending on the situation, some of them can access when there are adequate supports. For instance, visual impaired people can learn English and get a job where they need to speak to people or give information as in the tourism industry.

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### 3.3.2.5 EFL Learning and English Classes.

Figure 3.7

EFL Learning and English Classes Associations.



It is undeniable that for EFL learning, teaching and learning strategies are of utmost importance because they impact on other subthemes. For instance, the lack of appropriate teaching strategies will result in a poor or even bad learning experience that might cause insecurities or diminish the effort and time the learner was initially willing to invest, as the following excerpt shows, in which Gabriela talks about the activities the teacher assigned:

*La maestra se iba más por actividades así de investigaciones, que pues casi no tenían relación con el inglés.*



*The teacher preferred activities related to research and all that, well, they were almost not related to English (Gabriela, age 17).*

Regarding previous experience, it was also mentioned that it would have been good to have the opportunity to learn the language since they were in elementary school, they have the idea it would not be so difficult for them now. In line with this, Felipe thinks it is good that EFL learning is compulsory beginning in elementary school as the following comment shows:

*Si se me hace algo importante, algo que podría ser obligatorio, pero me gustaría que el inglés se empezara desde primaria que es cuando, pues apenas se el cerebro del niño empieza como que a madurar ...y que pueden captar la información y mantenerla ahí. Y sería muy importante que desde primaria o incluso hasta en preescolar, se puede iniciar en inglés para que para cuando llegemos, a un nivel como ahora, ya no sea tan complicado.*

*I think it is something important, something that could be mandatory, but I would like English to start in elementary school, which is when the child's brain is just beginning to mature ...and they can grasp the information and keep it there. And it would be very important that from elementary school or even pre-school, they can start English so that by the time we get to this level like now, it wouldn't be so complicated (Felipe, age 20).*

Based on the findings, at this point another important issue is related to the materials and the use of ICTs that might help the language teacher to make the class more dynamic and enjoyable to the learners. Class activities can maintain or increase learners' interest, effort, and engagement just as Hanna says. This point can be understood with the following comment:

*Totalmente interesante, creo que el... Las didácticas que meten las, las maestras, pues creo que hacen que sea más llamativa la clase. Entonces, pues creo que es importante que, aunque estemos grandes, meter actividades para reforzar el inglés, aunque haya pues, algunos compañeros que no estén tan interesados, pero las maestras hacen su esfuerzo para, pues poder tener una clase llamativa, aunque sea un pésimo interés el que tengan los compañeros.*

*Totally interesting, I think that the... The didactics that the teachers use, I think that they make the class more attractive. So, I think it is important, even though we are older, to include activities to reinforce English, even if there are some classmates who are not that interested, but the teachers make an effort to have an attractive class even if the classmates are not that interested (Hanna, age 18).*

Some of the interviewees mentioned they use technology to solve doubts or practice a little what they learn in class and improve their pronunciation while listening to music in platforms (Spotify) or watching videos (YouTube) and movies (Netflix). Additionally, higher education students use Google to look up information or a translation service, they follow content producers teaching English in TikTok or use apps such as Duolingo as Hanna explained:

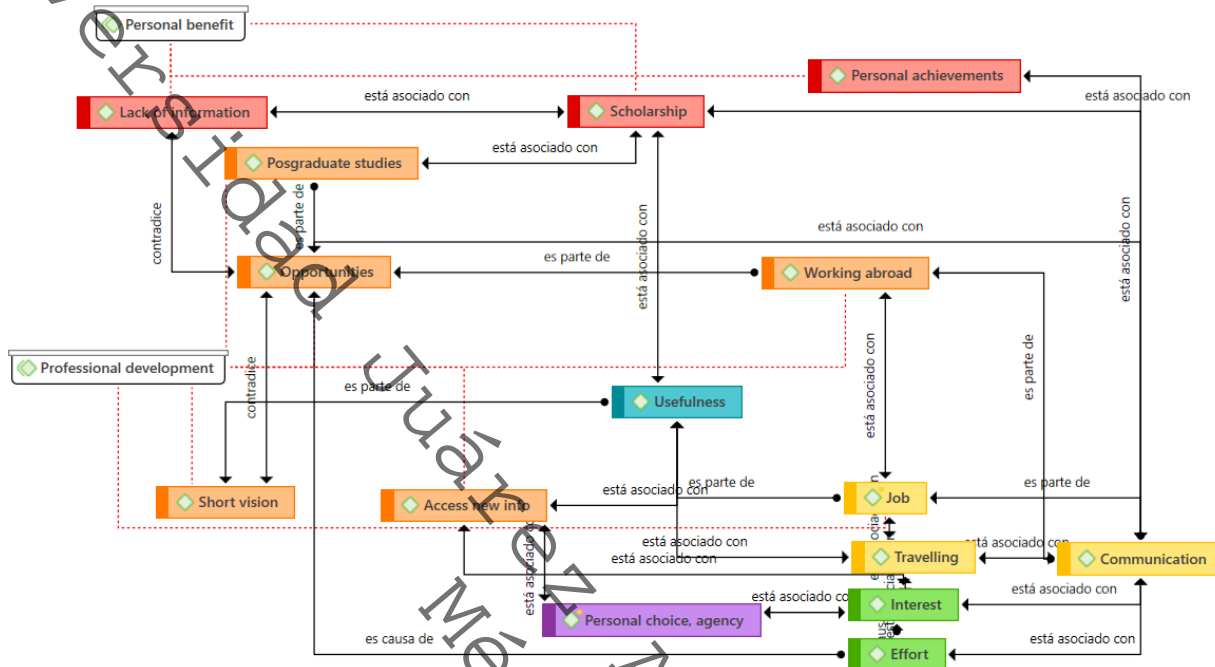
*Tenía "Duolingo" que es el del búho, para practicar el inglés, eh... Intenté descargar programas para socializar con gente de otro país, pero como piden meter dinero, ahora sí que pagar la suscripción, pues ya no me animé.*

*I had "Duolingo" which is the one with the owl, to practice English, eh... I tried to download programs to socialize with people from another country, but since they ask you to put money in, I mean you must pay the subscription, so I didn't dare anymore (Hanna, age 18).*

### 3.3.2.6. Personal Benefit and Professional Development

Figure 3.8

Personal Development and Professional Benefit Associations



The analysis revealed interesting results in the dimensions of personal benefit and professional development. This group of higher education students identify job opportunities as a result of EFL learning, as Felipe explains. They can identify good outcomes, or they see it as an alternative to get a job.

*No es una pérdida de tiempo porque es algo que más adelante nos, nos puede servir incluso este, pues ahorita como está complicado lo de las plazas y todo eso, pues como que sería una segunda herramienta como para poder obtener un trabajo de ser como maestro de inglés.*

*It is not a waste of time because it is something that we can use even later because right now is complicated to get a position with the low number of vacancies and all that, it would be like a second tool to be able to get a job as an English teacher (Felipe, age 20).*

Moreover, it was also found that some of them, such as Felipe, have some information regarding the opportunities related to their professional development such as scholarships, postgraduate studies opportunities, having access to updated information and even working abroad probabilities as mentioned in the next excerpt:

*Me ayudaría bastante como para como usted lo dice, para poder tener una beca o algo, así creo que sería algo, algo fundamental.*

*It would help me a lot as you say, to be able to have a scholarship or something like that; I think it would be something, something fundamental (Felipe, age 20).*

Nevertheless, their fears and limitations are involved with that topic as it is expressed by Irma who affirms that:

*Sí, igual sé que aparecen becas, pero igual hay que como que aprender bien el inglés.*

*Yes, I know that scholarships are available, but you still have to learn English well (Irma, age 19).*

Moreover, one participant shared that are family or contextual limitations too, to apply for scholarships and live abroad alone just as Melissa pointed out:

*Sí, a mí sí me encantaría. De hecho, le he comentado en mi casa porque la otra vez la miss comentó que ya se han ido chicas. Y a mí sí me gustaría y por eso me gustaría aprender, pero mi mamá no quiere.*

*Yes, I would love to. In fact, I have talked about it at home because the other day the teacher said that some girls have already got them. And I would like to and that's why I would like to learn, but my mom doesn't want me to go (Melissa, 18).*

Thus, the lack of information, personal or family limitations or a short vision of the potential opportunities they have, limit, or diminish language learning investment of some higher education students. Here, two opposite opinions illustrate the last inference. On the one hand, Bety's commented that she limited the use of the language to a single experience:

*Pues si algún día llegase a viajar a otro país, pues si me va a funcionar, pero pues no lo veo como la razón por la cual aprenderlo.*

*Well, if someday I were to travel to another country, it would work for me, but I don't see it as a reason to learn it (Bety, age 21).*

And on the other hand, Hanna is interested in working out of her hometown, she showed a wider vision even she did not consider the necessity of reading updated information or postgraduate studies for professional benefit.

*Sí lo puedes usar y a la vez no. Bueno, en este caso, pues en la licenciatura de inclusión educativa, pues no se ve tanto el idioma del inglés. Pero para una persona que sí se quiere ampliar, a nuevos panoramas, pues yo quiero proponerme trabajar en otro lugar. Eh, de maestro, pues creo que sí, es importante.*

*Yes, you can use it and at the same time you can't. Well, in this case, in the inclusive education degree, English language is not so used. But for a person who wants to broaden his or her horizons, well I would like to work somewhere else. Eh, as a teacher, I think it is important (Hanna, age 18).*

All these findings might show a particular situation in this group of higher education students. It is possible that some individuals lack sufficient and timely information regarding the opportunities they have for personal and professional development in their disciplinary area. However, it might also be a context-related situation that impedes the students to have a complete view of the options for their future development. It can be inferred that most of these learners have not identified clear necessities to learn English in relation to their professional development.

### 3.4 Summary of Results

The two quantitative Likert-scale questionnaires that were designed following the principles of the measurement theory, were validated and statistically tested to prove stability of answers, internal consistency and construct validity. The data obtained with both, pilot and final versions of the questionnaires were not normally distributed so non-parametric analyses were used. Kruskal-Wallis tests for independent samples were run on an item-by-item basis to check stability of answers and they showed that the results of both versions were similar, so they were considered reliable. After that, the versions were analyzed together because no significant differences were found. The next step was to check internal consistency running the Cronbach Alpha coefficient to confirm unidimensionality and inter-item correlation coefficient to confirm the items contribute to the dimension they belong to. The items were analyzed by dimension since they were grouped when the questionnaires were designed. Finally, to prove convergent validity that demonstrates a relation between the elements, Spearman's tests were run because we must remember there was absence of normality of the data.

The investment questionnaire showed absence of consistent normal distribution in all the dimensions therefore, non-parametric tests were used. Two items in the pilot version were excluded because they exhibited unreliable answer patterns when the Kruskal-Wallis test was run. However, there were no significant differences between versions. When the Cronbach Alpha coefficient and the inter-item correlation were run by dimension, to check internal consistency, not reliable items were excluded and 36 were retained. In the final version, the four dimensions were considered reliable. After the Spearman tests were run between dimensions, a low correlation was found between agency and engagement and agency and motivation. With respect to necessities the correlation with agency, engagement and motivation is also low. However, a moderate correlation was found between motivation and engagement dimensions.

The attitudes questionnaire was given the same treatment, the absence of normality was found again in this instrument and the same test used before were selected for the second questionnaire. In the pilot version, one item showed unreliable answers in the Kruskal-Wallis test and it was excluded from the final version. No significant difference

between versions was found. The results of internal consistency obtained running the Cronbach Alpha and the inter-item correlation coefficients resulted in the exclusion of the items that obtained values lower than expected, as explained before. The initial number of items was 42 and after the exclusion, a total of 34 items were retained for the final version of the attitudes questionnaire. In relation to the correlation between dimensions the Spearman's correlation analyses revealed different degrees of correlation: negligible between multilingualism and English class and multilingualism and learning English; low correlation between multilingualism and personal development and learning English and personal development; finally, a moderate correlation between English class and personal development and professional benefit and personal development.

When the correlation between the two questionnaires and the dimensions were examined, differences were found between the pilot and final samples results. The correlation between learning English and motivation; and learning English and engagement decreased from low to negligible. However, a moderate correlation was retained between motivation and English class and increased between motivation and engagement and personal benefits and necessities. The rest continue showing low correlation strength.

Qualitative findings presented in this chapter might help to explain the relationship between attitudes and language learning investment of this group of higher education students. In this vein, the findings of the interview can contribute to explain or better understand the factors that interact in this relationship and how the attitudes towards compulsory EFL learning influence the level of investment among these students.

On the one hand, this group of higher education students, in general, identify the necessity of learning English nowadays and are aware that there might be more opportunities for those who learn English. Some learners explained that they would like to have the opportunity to learn English since elementary education. They assumed that children are more likely to learn a second language than teenagers and adults, and now is more difficult for them that they must comply with the requirements of all the other subjects in the degree. Regarding the English classes they receive as higher education students, they described the effort they make to complete the class activities and the

satisfaction they feel when they are able to succeed. Likewise, some students described their learning strategies to practice what they learn at school, for instance, listening to music, learning the lyrics, transcribing notes, working with peers and watching videos with subtitles in English. Nevertheless, there is something that impedes their agency, it would be interesting to find out what factors are related to this issue.

On the other hand, previous experience with non-qualified teachers with different limitations that cause the learners to have a bad experience with the language when they have meaningless or unsatisfactory encounters with the target language. Similarly, these experiences affect the learners' motivation the moment they promote insecurity and lack of satisfaction when they become aware that they have received instruction for several years and they are not able to communicate with others. Some of the participants talked about their insecurities in relation to frustration when they are target of criticism and do not feel capable to speak with good pronunciation. However, it is necessary to take on account that effort and time are required from the student in addition to good teacher guidance and interesting and updated materials to promote an enjoyable learning experience. Additionally, the necessity to learn the language is crucial to increase the motivation, interest, and effort. This group of higher education students that are not related to language teaching, do not identify a strong necessity of learning the language in relation to their profession. This group of participants are not required to read updated information in English neither to participate or interact with English speakers. Moreover, it was found that these students consider that learning a second language might not be necessary for the community they could serve.



## Chapter: 4 Discussion

This chapter presents the discussion of the results presented in Chapter 3. The discussion is developed around the research questions presented for this study. Next, the contributions in relation to the design of quantitative instruments, the group of population. Then, the limitations due to the population, sampling procedure and size of the sample. together with the interests for future research. and finally, the conclusion of the study is presented.

### 4.1 Answers to Research Questions

The following objectives were set for this study: 1. To analyze the attitudes towards and investment in compulsory EFL learning among higher education students from programs which are not related to the EFL profession. 2. To examine whether the attitudes the students have towards compulsory EFL learning have an impact on the level of EFL learning investment among higher education students from programs which are not related to the EFL profession. 3. To describe factors that underpin EFL learning attitudes and investment among higher education students from programs which are not related to the EFL profession. To achieve these objectives, a mixed methods study with an explanatory sequential design was conducted to obtain sufficient data to answer two research questions:

RQ1: What is the impact of compulsory EFL education on the type of language learning attitudes and level of language learning investment among higher education students from programs which are not related to the EFL profession?

RQ2: What factors underpin the relationship between students' attitudes towards compulsory EFL learning and language learning investment among higher education students from programs which are not related to the EFL profession?

In relation with RQ1 that questions about the impact of compulsory EFL education on the type of language learning attitudes and level of language learning investment among higher education students from programs which are not related to the EFL profession, is necessary to recall that in this study attitudes were understood as evaluative appreciations based on beliefs that impact on the individual's behavior (Artamonova,

2020; Gardner 1985). Besides, Taylor and Marsden (2014) state that there is a relation among behavior, attitudes, and subjective perceptions. Moreover, as Lightbown and Spada (2006) claimed, there are different factors that intervene in different situations where the learner can be involved. Nonetheless, the same authors affirm that, there is a complex process to determine what comes first, if positive and negative attitudes, or successful learning.

The second concept that needs to be mentioned is language learning investment. As defined by Norton Pierce (1995), it is related to the learners' determination to learn and the interest they show when they notice the benefits. Moreover, investment implies commitment and engagement in the learning process (Norton, 2020). Hence, it creates conditions for learners to be involved in their learning.

When the mentioned ideas are considered, what can be determined after the analysis of the quantitative results is that the attitudes shown by these participants were divided. Positive and negative attitudes were identified in this group of higher education students who are not related to language teaching. As mentioned in literature, the needs in this case related to communication (Norton et al, 2020; Norton & Toohey, 2011) and the attitudes towards learning a second language can influence to define the motivation of the learner (Lightbown & Spada, 2006). In this group, the participants showed motivation when they revealed that learning English is important to them and their choice to invest time and effort to learn it, what is in line with Artamonova's findings (2020) who examined the attitudes of American higher education students, learners of Spanish and found that de attitudes impact the decisions taken by the students to continue investing in language learning. It is worth to mention that the Spanish learners were not immersed in the target language context, just as the group of higher education students participating in this study. Working with a different group of learners, immigrants immersed in the target language context, Norton (2013; 2019) reports findings in line with the ones previously mentioned. When the immigrant learners she worked with had the motivation and identified the needs to learn, they invested time and effort to accomplish the goal of communicating with others and becoming part of a group. In the same vein, the higher education learners in this study, expressed feeling proud and satisfied when they were

able to complete class activities assigned by the language teacher. However, contrary to what Norton (2013; 2019) reported, learners in a different context were not able to identify the necessity to communicate with others using English as they do not need the language for social interaction in the context where they are immersed (Juexuan et al., 2020).

Learning English is compulsory in many programs and this group of higher education participants showed understanding regarding the importance of EFL learning during their university studies (Artamonova, 2020; Lacka-Badura, 2021; Norton 2013). Nevertheless, only half of the participants enjoy the time spent during the process. While the participants seem to show engagement to learn the target language, they express their lack of confidence using it and having difficulties to understand other speakers. These facts might interfere with the amount of satisfaction and the benefits detected by the learners, moreover, the mentioned facts can interrupt the positive cycle promoted by obtaining good feedback to increase the amount of investment to continue learning. Juexuan et al. (2020) affirm that when the learners find applicable benefits or affordances that may be identified as part of the economic or cultural capitals (Darvin & Norton, 2015) motivation may increase. However, it was found by these authors that when learners invest only because learning is compulsory to obtain the degree, no benefits are perceived and they do not identify themselves as English speakers, then investment decreases. The latter goes in line with the present study which reported that this group of learners not related to language teaching, were not able to identify professional necessities to invest in language learning.

In the same line, the satisfaction they report is not enough to foster their agency. Qualitative results confirm the quantitative findings which show they are content with the activities assigned to them and do not seek or carry out activities of their own choice. Moreover, some of the participants that expanded their answers in the interview explained their beliefs and behavior towards using the language to communicate orally. Speaking and pronunciation are within their major worries. Frustration arises when learners are asked to interact among them or with the language teacher in class and they struggle to express a few coherent ideas because they are always afraid of criticism. In this regard, their interest and motivation are not associated with enjoyment consequently, contrary to

what was explained by Dörnyei and Ushioda (2011) positive values and attitudes are not promoted during EFL learning.

Divided opinions were expressed by the participants of Ali (2020) regarding the necessity to invest to access the opportunities learners have when they learn English. In her study, she worked with Spanish speakers in relation to identity and investment in language learning. In this study, for instance, winning scholarships or having the chance of getting a job abroad are some options for these learners. The beliefs were expressed in the qualitative results when the interviewees showed opposite opinions. Some of them were interested in working abroad and some others considered it was not a possibility for them. The results of this study shed some light regarding Burke et al. (2017) statements who discuss the situation of graduate students that attempt to meet the expectations of employers. It is a fact that learners need to invest in their learning to have more opportunities related to professional and personal development in terms of job, social interaction, and economic changes. Furthermore, higher education students need to develop their skills and struggle with the elements of the socio-cultural system explained by Bourdieu to access the “graduate market” (Burke et al., 2017). There is no doubt that this group of students and their families are investing effort, time, and money in their learning. Learning another language could be very useful to modify and improve their cultural capital. This would lead to an improvement of their social and economic capitals. When these students become in-service teachers, they could be better trained and be updated to provide a better service. Their qualifications could be recognized by their peers and restructure their social relationships. The changes could even help them to improve their income just as Bourdieu (1987) expressed when he explained that those who invest in their education, are able to monetize the effort and time they put on it during the learning process.

An interesting finding was that learners’ answers indicated they liked the teaching strategies of the language instructor who varies activities, materials, and kinds of tasks to keep their attention and interest. All these strategies play an important role in generating good experiences that will later be considered to promote positive attitudes towards continue learning (Lightbown & Spada, 2006). Nevertheless, this group of learners did not

feel confident and showed low motivation to be independent and become agents of their own learning (Hahl & Mikulec, 2018; Kavrayici, 2020; Tan et al., 2017). These results explain the low correlation found in the quantitative results between motivation and agency, and learning English and personal development.

With respect to RQ2 about the factors that underpin the relationship between students' attitudes towards compulsory EFL learning and language learning investment among higher education students from programs which are not related to the EFL profession, the quantitative data allowed to find the correlation between the different dimensions of attitudes towards language learning and language learning investment. The alternative hypothesis can be retained since an influence of compulsory language learning upon attitudes and investment was identified in the quantitative and qualitative results. Qualitative findings in literature have revealed that attitudes and investment in learning are related. As it has been mentioned, several factors have been studied, for instance, beliefs (Turgut, 2021), emotions (Yang et al, 2021), needs (Ali, 2020), engagement (Angelovska, 2021; Hiver et al., 2021), agency (Harrison et al., 2013), self-efficacy (Carlioni & Sisti, 2019) and others. The quantitative results are in line with previous research. Findings revealed weak, but positive correlations between motivation, engagement, learning English and English class dimensions. In general, all the attitudes dimensions, including professional benefit and personal development show a weak correlation with investment dimensions.

At this point, qualitative data collected in the second phase of the explanatory sequential design helped to provide evidence to explain the correlations found between dimensions based on the positive and negative stand of the participants. Regarding investment dimensions (i.e., motivation, necessities, engagement, and agency) the interviews showed that this group of higher education students is motivated and engaged in learning English. Notwithstanding, in line with Teng (2019), investment in language learning fluctuates, and the capacity of the learners to identify facts and patterns of control influences their investment. It is a matter of interest to identify whether this is due to contextual or cultural factors. The idea of investment fluctuation and pattern identification sustains the findings regarding the capacity to identify the necessities and taking actions

to become agents of their learning. In the case of the higher education learners that participated in this study, a divergent position from the one presented by Diep and Hieu (2021) and Lacka-Bandura (2021) arises when the necessity of learning English is accepted, but they are not quite capable of identifying the reasons that make English necessary for them, nor a reason to find it useful and valuable. Lacka-Badura, (2021) who worked with undergraduate students of different degree programs, explained that learners may feel more stimulated to learning when they identify the needs and perceive the value of learning. Hence, students' learning quality is fundamental for them to be competitive and have possibilities to access scholarships and other options available for professional development. Moreover, Diep and Hieu (2021) affirm that one element that promotes societal development is that higher education participates in training the individuals who will make up the workforces. The education process fosters growth in knowledge, attitudes, culture, and behavior to integrate individuals into a competitive environment. In this vein, the group of higher education students who participated in their study were from different degrees and specializations and recognized that learning English is vital. These authors' findings suggest that it is necessary to improve English learning in students who are not majoring in the language, finding which can be seen as a similarity to the present study.

In relation with the professional benefit and personal development a contradiction was identified regarding EFL learning because despite the participants recognize it can promote more job opportunities, learning a language (i.e., English) is not appreciated as an add-on qualification by this group of students (Amorati, 2018; Diep et al., 2021; Vu et al., 2021). In line with Taylor and Marsden (2014) findings, the personal importance given to language learning might reflect the relevance the language has in society. Additionally, the importance given to language learning might help to predict the choices made by learners, the effort and time invested in learning a language. Hence, if learning English is not considered necessary or relevant for future personal and professional development, learners may not show perseverance and determination to achieve the goal. In the present study, the quantitative findings showed engagement to learn English, nonetheless, the qualitative findings revealed the lack of confidence to use the language for communication and difficulties to understand others. This situation limited the learners' participation and

engagement in other activities than the ones assigned in the classroom. This fact could impact on the learners' interest of becoming agents of their own learning process as mentioned above. Further studies may be carried out to determine the relation between the context, area of studies and the necessities identified by the learners, because even they acknowledge that learning English can entail more job opportunities, there are learners that are reluctant to participate actively in their own learning process.

#### **4.2 Contributions**

The contributions of this study can be described in terms of theoretical, methodological, and practical contributions. The first contribution is a theoretical one and it goes in line with the relationship between the constructs of attitudes towards language learning and language learning investment. It was possible to determine the relationship between the dimensions of each construct and between constructs. It is worth to mention that other instruments presented in previous research focused on language learning attitudes (Artamonova, 2020; Taylor & Marsden, 2014), identity and commitment (Soltanian et al., 2018), engagement (Hiver et al., 2021; Sulis, 2022) and agency (Harrison et al., 2013). Nevertheless, this study was directed to the effect of attitudes on the general construct of language learning investment particularly on the four dimensions of motivation, necessities, engagement, and agency which have been mostly studied separately and in different contexts with different groups of learners.

As methodological contributions the following can be included. The first one entails the design of two quantitative instruments that help to collect quantifiable data, one with respect to language learning investment in higher education students and the other regarding their attitudes towards compulsory EFL language learning. Both instruments explore dimensions that have been identified and studied separately in previous research (Ali, 2020; Angelovska, 2021; Carlioni & Sisti, 2019; Harrison et al., 2013; Hiver et al., 2021; Turgut, 2021; Yang et al., 2021). Additionally, the quantitative component in this study allowed to come up with valid and reliable instruments, while the qualitative component contributed with more data to expand and explain the results obtained in the first phase of the study. It was possible to achieve internal validity through content, construct and convergent validity checking the items and their correspondence with the

different dimensions (Cohen et al 2018; Dörnyei, 2010). Furthermore, reliability procedures to check stability of answers, inter-item correlation and internal consistency were used (Boyle & Fisher, 2007; Cohen et al., 2018; Field, 2013).

A second methodological contribution is related to the number of points on the Likert-scale questionnaires. Four options were used in a balanced proportion of positive and negative answers. Therefore, the neutral point was omitted to avoid ambiguity in the answers making the participants to take a stand (Cohen et al, 2018; Guy & Norvell, 1977; Hodge & Gillespie, 2007), this fact eliminated the loss of participants by avoiding neutral responses. As mentioned in a previous chapter, there is not agreement on the number of points that should be included in the scale, however it could be useful to think on the age of the participants in relation to their attitude answering the questionnaire. A large number of points could affect the interest negatively or may require longer time for reflection that young students could be unwilling to give.

A fourth point that can be identified as a practical contribution is that in Mexico, language learning has been studied with in-service and pre-service teachers (Flores et al., 2020; Izquierdo et al., 2017; Izquierdo et al., 2021; Lengeling & Mora, 2016) in relation to their identity, practice, and curricular changes, but not in relation to language learning investment and its dimensions. In this tenor, the study contributes with information of Mexican higher education EFL learners who are not related to language teaching. It is a matter of interest to be able to describe the relationship of learning attitudes and language learning investment among students of different disciplines in Mexico to have the opportunity to focus the effort on materials design and learning activities that promote students' investment. In this study identity was not considered because this group of higher education students are not immersed in the target language context what would contribute to their personal identity development. Besides, they are unrelated to language teaching, however, it must not be forgotten that identity is a multi-faceted construct that entails a dynamic construction process. In the end, personal and professional identities influence learners' decisions and actions.



### 4.3 Limitations

There are some methodological limitations in the present study for example. The first one relies on a non-random selection of participants. This limitation occurred because of the number of students enrolled in the program. Therefore, external validity was not achieved due to the sample size, the sampling procedures and the absence of diverse disciplinary areas (Cohen et al 2018; Dörnyei, 2010). However, this situation invites for further research with bigger samples and in different disciplinary areas to compare findings. Another fact is the possibility of having more than one researcher involved to increase inter-rater reliability as they participate as interviewers and data coders. A second limitation that was identified was the context in which the study was carried out. It should be taken into consideration that in many other studies, the learners were in contact with the target language. However, the instruments in this study were designed for EFL learners of higher education for whom language learning is compulsory and are not in contact with the target language. Therefore, further studies could help to remedy the mentioned shortcomings and contribute to widely explore if there are differences among disciplines and the particular value and usefulness given to EFL learning by students from different areas, educational and economic contexts. It must be acknowledged that besides the different groups of learners, further research can consider different studies, for instance, correlational or even interventional to see how the attitudes towards compulsory EFL can be modified, when the factors involved in the learning process are changed and how the changes impact on language learning investment.

Depending on the point of view, a third methodological limitation could be related to the number of points on the Likert-scale questionnaires, because the neutral point was omitted and the participants were forced to take a stand (Cohen et al, 2018; Guy & Norvel, 1977; Hodge & Gillespie, 2007). Future research can explore if the absence of normality in the data is modified with the use of more points in the scale or the addition of a neutral point.

We consider that a fourth limitation focuses on the sociodemographic data which were not deep enough to explain or infer the cultural and economic capitals of the participants, so it is not possible to determine if there are contextual and economic factors

that diminish the expectations of these students. It would be of great interest to know the influence of the context given that public teacher training institutions in Mexico are trying to gain recognition. Teachers graduating from public institutions try to insert themselves in the public education system, however, their job prospective is different from other professions. The latter could be linked to their interest in second language learning and could help to explain their views on the need of English for their future professional lives.

It would be matter of future research to determine if the economic context has a mayor or negative influence in language learning investment or it relates to the disciplinary area. It is possible that considering the context, the economic limitations impede some learners from reckoning with the possibility of traveling or working abroad. Furthermore, family limitations can be also explored. They may be related to specific contexts, for instance, when the parents do not allow students to leave the family home as expressed by one participant during the interview. It would be interesting to know if this is related to traditions, parents having confidence in their children or the economic resources the families have. Exploring these factors would shed light on the reasons the learners have for the attitudes and motivations they show (Taylor & Marsden, 2014).

#### **4.4 Implications**

In search of quality, equity and inclusion, educational reforms are frequently made by people who have no experience in real context. Therefore, the real needs are potentially ignored, and the available resources are as well. As far as EFL learning is concerned, educational policies have made it compulsory no matter what the reality of the students is, the context, needs, or individual expectations. As already mentioned, the relationship between attitudes towards compulsory EFL learning and language learning investment are the focus of this study. Nevertheless, there were some outcomes or consequences worth to mention and to be considered for future research. Based on the findings, if learners' needs were considered during future curricular changes, or the changes were customizable it might be possible to raise awareness regarding EFL learning among higher education students. Comparative studies among different disciplinary areas could help to identify specific needs and evaluate convenient future changes to the educational model regarding compulsory English language learning.

## 4.5 Conclusions

This mixed methods study helps to evince that no matter the proposals to reach equity and inclusion, intention is not always enough. Skills are not developed just because it is mandated and, as stated by Shapiro et al. (2007), solutions need to be designed and planned according to the educational needs, which are not the same in every context. The use of this study may help education stakeholders to obtain the necessary information to modify policies or design new curricula that fit the needs of different areas of study and different contexts. The findings of the present study first, allow to infer that the individual value given to EFL learning combined with personal expectations regarding personal and professional development, influence the attitudes and modify the necessities of people. Just as Bourdieu (2011) explained when he referred to the cultural and economic capitals, the different background and social interaction each learner has, impact on the acquisition of knowledge. The latter is further supported by the comments of Lu et al. (2020) regarding the learning opportunities each person decides to search in the interest of achieving better economic strata.

In relation to opportunities, the second point is the need of new research regarding language learning investment in higher education students in different disciplinary areas where EFL is also compulsory because findings might be striking; mainly if English is considered necessary for interactions and professional development. In this line, the third fact points out what Harrison et al. (2013) stated, in relation to agency when they affirmed that to promote investment is necessary to create opportunities for agency. The present findings make evident that it is fundamental to find the connection between the students' necessities and their personal and professional expectations, that link would help to foster motivation and investment in language learning. It should not be forgotten that personal beliefs influence motivation, behavior and positive attitudes towards learning. The perception of power (Bourdieu, 1987, 2011), peer recognition, the possibility to make choices and having teachers' support are associated with agency (Harrison et al, 2013). In the end, with determination and perseverance learning investment must pay back.

A fourth point that deserves attention is that this group of Mexican higher education students revealed awareness of the importance of EFL learning for their lives and to some

extent, for their future professional activity. Considering that learning the target language is compulsory within the curriculum, it is true that these learners showed motivation and positive attitudes towards language learning. Finally, it can be inferred from their answers in the interviews that they consider it worth the effort as other authors such as Artamonova (2020) and Norton (2013; 2019) have reported in their studies.

No one would dispute that when satisfaction is reported by the learners it may be inferred that a positive cycle can take place to enhance language learning investment. The moment learners see good outcomes that pay for their time and effort, they might be willing to continue investing and show positive attitudes towards language learning. Engaging in assigned language activities helps them develop their language skills and entails positive attitudes too. However, results show that within this context, learners do not enjoy the time spent during the process. Moreover, difficulties to understand other interlocutors and lack of confidence while speaking were reported. The origin of these two facts may be further explored to help language teachers to find solution to these problems.

It is also matter of further study the low interest in becoming agents of their own learning, taking into consideration that the use of technology does not represent a problem for them. If the age of this group of learners is considered, higher education students are now part of the group known as digital natives. The use of computers, electronic devices, software, and mobile applications should not be a problem to them. It is not the intention to affirm that the learners must be proficient users of any kind of technology, only because of their group of age, but at least show their affinity. Hence, it appears quite intriguing the lack of interest of these learners regarding the use of electronic devices and apps to exercise their agency and enhance their learning. One reason might be that learners do not identify real necessities for EFL learning in their context. In that vein, higher education students must start thinking beyond the limits of their profession. They should think of their own professional development, but moreover, they should think of working collaboratively to solve problems in their disciplinary area. There are many possibilities to be part of interdisciplinary teams that seek to solve problems that affect the population in different contexts.

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## Appendix A.

### Instruments

#### A1 Survey

##### 1. Survey (sociodemographic info)

#### Sección 1. Información

El objetivo de este cuestionario es obtener información sobre tus antecedentes personales y experiencia relacionada con el aprendizaje del inglés. Es parte de un proyecto de investigación que se lleva a cabo en la Escuela Normal de Educación Especial para la realización de mis estudios de Doctorado en Educación en la Universidad Juárez Autónoma de Tabasco. Te pedimos que por favor nos des **tu opinión sincera**. Te reiteramos que toda la información que proporciones será manejada de forma anónima y confidencial. No será compartida con el personal de la escuela.

Si tienes alguna pregunta puedes contactar a la persona responsable:

Leonor Dazón Ledesma

Correo: tab02000001@normales.mx

¿Estás de acuerdo en que la información que proporciones sea considerada para el proyecto de investigación?

a) si            b) no

Si estás de acuerdo por favor escribe tu correo y un número de teléfono para contactarte en caso necesario.

Nombre completo: \_\_\_\_\_

Correo electrónico: \_\_\_\_\_

Número de teléfono: \_\_\_\_\_

#### Sección 2. Información sociodemográfica

Por favor escribe la información que se solicita para tener información general sobre tu persona. Recuerda que será confidencial.

1. Nombre (apellido paterno, materno, nombre)			
2. Correo electrónico _____			
3. Edad	a) 17-20	b) 21-24	c) 25 o más
4. Género	a) hombre	b) mujer	
5. Lengua materna	a) español	b) inglés	c) lengua originaria
6. Idioma(s) que hablan tus padres	a) español	b) inglés	c) lengua originaria
7. Idiomas que hablas tú	a) español	b) inglés	c) lengua originaria

### Sección 3. Experiencia previa en el aprendizaje del inglés

Lee con atención y marca las opciones correctas. Puede ser más de una.

8. Años de estudio de inglés	a) 6 de primaria	b) 3 de secundaria	c) 3 de bachillerato
9. Lugar donde estudiaste	a) Escuela pública	b) Escuela privada	c) Escuela o instituto de idiomas
Después de leer, elige <b>solo una</b> opción para las siguientes preguntas marcando con una "X"			
10. Tus padres estudiaron inglés	a) si	b) no	
11. Tus padres apoyan que estudies inglés	a) si	b) no	
12. Has viajado a un país donde hablen inglés	a) si	b) no	
13. Tienes familiares que viven en otro país donde se hable inglés	a) si	b) no	

### Sección 4. Razones para aprender inglés

Lee la lista de razones y marca sí o no según sea tu situación.

14. Era una materia de la escuela	a) si	b) no
15. Mis papás decidieron que yo lo estudiara	a) si	b) no
16. Para salir de viaje	a) si	b) no
17. Para estudiar en otro país	a) si	b) no
18. Para comunicarme con otras personas	a) si	b) no
19. Para entender canciones, películas y videojuegos	a) si	b) no

**¡Muchas gracias por tu participación!**

## A2 Scale questionnaire: Attitudes

V -1

### Introducción

El objetivo de este cuestionario es obtener información sobre experiencia previa experiencia relacionada con el aprendizaje del inglés y tu punto de vista sobre su utilidad para tu vida y tu profesión. Es parte de un proyecto de investigación que se lleva a cabo en la Escuela Normal de Educación Especial para la realización de mis estudios de Doctorado en Educación en la Universidad Juárez Autónoma de Tabasco.

Te pedimos que por favor nos des **tu opinión sincera**. Te reiteramos que toda la información que proporcionas será manejada de forma anónima y confidencial. No será compartida con el personal de la escuela.

Si tienes alguna pregunta puedes contactar a la persona responsable:

Leonor Dauzón Ledesma

Correo: [tab02000001@normales.mx](mailto:tab02000001@normales.mx)

¿Estás de acuerdo en que la información que nos brindes en este cuestionario sea considerada para el proyecto de investigación? Si No

Si estás de acuerdo por favor escribe tu correo y número de teléfono para contactarte solo en caso necesario

Nombre completo: \_\_\_\_\_

Correo electrónico: \_\_\_\_\_

Número de teléfono: \_\_\_\_\_

**Sección I: Actitudes respecto al aprendizaje de otras lenguas (Artamonova, 2020).**

**Después de leer con cuidado, selecciona SOLO una respuesta marcando con una cruz “X” la celda que mejor represente tu opinión.**

**En tu opinión, qué utilidad tiene saber varios idiomas.**

<b>I. Actitudes respecto al multilingüismo</b>	Totalmente en desacuerdo	Ligeramente en desacuerdo	Ligeramente de acuerdo	Totalmente de acuerdo
1. Las personas que hablan más de un idioma tienen más amigos				
2. Hablar más de un idioma es una habilidad valiosa				
3. Hablar solo un idioma es inaceptable actualmente				
4. Las personas que hablan más de un idioma tienen una visión más amplia del mundo				
5. Si aprendes inglés es más que suficiente para tener éxito.				
6. Se necesita aprender inglés solo para vivir en otro país.				
7. Me gusta la idea de hablar español e inglés.				
8. Las personas que hablan español e inglés tienen ventajas sobre los demás.				
9. Admiro a las personas que hablan varios idiomas.				
10. Hablar solo la lengua materna es suficiente para mí				

**Sección II: Actitudes hacia el aprendizaje del inglés.**

**Después de leer con cuidado, selecciona SOLO una respuesta marcando con una cruz “X” la celda que mejor represente tu opinión.**

**En tu opinión qué tan ciertas son las siguientes afirmaciones sobre el inglés.**

<b>II. Actitudes hacia el aprendizaje de inglés</b>	Totalmente en	Ligeramente en	Ligeramente de acuerdo	Totalmente de acuerdo
11. Me gusta el inglés.				
12. El inglés es un idioma importante en la actualidad.				
13. El inglés es un idioma importante en México.				
14. El inglés es un idioma bonito.				
15. El inglés se oye bien.				
16. Me gusta escuchar el inglés en canciones, películas, videos e internet, etc.				
17. Hay idiomas que son más útiles que el inglés.				
18. Hay otros idiomas que me gustan más que el inglés.				

### Sección III: Actitudes hacia las clases de inglés.

Después de leer con cuidado, selecciona SOLO una respuesta marcando con una cruz "X" la celda que mejor represente tu opinión.

En tu opinión qué tan ciertas son las siguientes afirmaciones sobre aprender inglés.

<b>III. Actitudes hacia las clases de inglés</b>	Totalmente en desacuerdo	Ligeramente en desacuerdo	Ligeramente de acuerdo	Totalmente de acuerdo
19. Las clases de inglés siempre están entre mis favoritas.				
20. Me gusta mucho aprender inglés.				
21. Aprender inglés es divertido.				
22. Ojalá hubiera empezado a aprender inglés a una edad temprana.				
23. Vale la pena el tiempo usado para aprender inglés.				
24. Las clases de inglés son más entretenidas que otras clases.				

25. Lo que aprendo en las clases de inglés despierta mi interés.				
26. Aprender inglés vale el esfuerzo que representa.				

**Sección IV. Beneficio personal respecto a aprender inglés.** (Taylor & Marsden)

Después de leer con cuidado, selecciona **SOLO** una respuesta marcando con una cruz "X" la celda que mejor represente tu opinión.

En tu opinión qué tan ciertas son las siguientes afirmaciones sobre los beneficios de saber inglés.

<b>IV. Beneficio profesional</b>	Totalmente en	Ligeramente en	Ligeramente de acuerdo	Totalmente de acuerdo
27. Es importante aprender inglés en mi carrera.				
28. Es importante aprender más de un idioma en mi carrera.				
29. Es importante aprender inglés para tener mejor preparación académica.				
30. Saber inglés ayuda a obtener un trabajo mejor pagado.				
31. Saber inglés permite tener mejores oportunidades de desarrollo profesional (becas, movilidad, lecturas científicas).				
32. Necesitaré usar inglés en mi trabajo (para mi desarrollo profesional).				
33. Merece la pena aprender inglés incluso cuando crea que nunca lo usaré en mi profesión.				

**Sección V. Desarrollo personal.**

**Selecciona una respuesta marcando con una cruz “X” la celda que mejor represente tu opinión. En tu opinión qué tan ciertas son las siguientes afirmaciones sobre los beneficios de saber otro idioma.**

<b>V. Desarrollo personal</b>	Totalmente en	Ligeramente en	Ligeramente de acuerdo	Totalmente de acuerdo
34. Las personas que hablan inglés tienen más oportunidades en la vida que las personas que no lo hacen.				
35. Aprender otro idioma puede ser una experiencia gratificante en sí misma.				
36. Ser capaz de utilizar otro idioma es importante para mi futuro (profesional).				
37. Aprender otros idiomas es una pérdida de tiempo.				
38. Saber un idioma extranjero ayuda a las personas a sentirse mejor consigo mismas.				
39. Merece la pena aprender un idioma extranjero incluso cuando crees que nunca lo vas a utilizar.				
40. Los mexicanos deben aprender idiomas extranjeros.				
41. Aprender idiomas es aburrido.				
42. Todo el mundo debería ser capaz de utilizar al menos una lengua extranjera.				

**¡Muchas gracias por tu valiosa participación!**



### A3 Scale questionnaire: Investment

V1

#### Información

El objetivo de este cuestionario es obtener información relacionada con tu propia experiencia aprendiendo inglés y lo que haces personalmente para aprenderlo. Es parte de un proyecto de investigación que llevo a cabo en la Escuela Normal de Educación Especial para la realización de mis estudios de Doctorado en Educación en la Universidad Juárez Autónoma de Tabasco.

Te pedimos que por favor nos des **tu opinión sincera**. Te reiteramos que toda la información que proporciones será manejada de forma anónima y confidencial. No será compartida con el personal de la escuela ni cualquier otra persona.

Si tienes alguna pregunta puedes contactar a la persona responsable:

Leonor Dazón Ledesma

Correo: tab02000001@normales.mx

¿Estás de acuerdo en que la información que nos brindes en este cuestionario sea considerada para el proyecto de investigación?

Si

No

Si estás de acuerdo por favor escribe tu correo y número de teléfono para contactarte solo en caso necesario

Nombre completo: \_\_\_\_\_

Correo electrónico: \_\_\_\_\_

Número de teléfono: \_\_\_\_\_

**Sección I: Motivación**

**Después de leer con cuidado, selecciona SOLO una respuesta marcando con una cruz "X" la celda que mejor represente tu opinión.**

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
1. Me interesa tener los materiales preparados para la clase				
2. Soy muy perseverante para completar mis actividades de la clase de inglés.				
3. Disfruto el tiempo cuando lo dedico a mis actividades de inglés				
4. Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.				
5. Creo que hablar inglés frente a los compañeros de clase me causa nerviosismo.				
6. Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.				
7. Me entusiasma mucho aprender inglés.				
8. Me gusta realizar las actividades de inglés.				
9. Me enorgullece poder concluir las actividades de clase con éxito.				
10. Me interesa estudiar inglés más que otras materias.				
11. Creo que la inversión de tiempo y dinero para aprender inglés valen la pena				

## Sección II: Necesidades

Después de leer con cuidado, selecciona SOLO una respuesta marcando con una cruz "X" la celda que mejor represente tu opinión.

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
<b>El inglés me sirve</b>				
12. para comunicarme con otras personas.				
13. para interactuar con personas de otras culturas.				
14. para integrarme a comunidades de otros países.				
15. para obtener una beca para estudiar en otro país.				
16. tener acceso a la información actualizada que se publica en inglés.				
17. para conseguir un trabajo bien pagado.				
18. para tener oportunidades de trabajo en otro país.				
19. para usar la tecnología y videojuegos con mayor facilidad.				
20. para ganar más dinero demostrando más competencias que otros.				

## Sección III: Compromiso personal para el aprendizaje

Después de leer con cuidado, selecciona SOLO una respuesta marcando con una cruz "X" la celda que mejor represente tu opinión.

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
21. Asistir regularmente a clase de inglés es importante para mí.				
22. Tener los materiales que necesito para la clase es una prioridad para mí.				
23. Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.				
24. Hacer los trabajos que se asignan como tareas me es útil para repasar.				
25. Poner atención a las explicaciones del profesor me es necesario.				
26. Realizar las actividades escritas que asigna la maestra me resulta útil.				
27. Participar en las actividades orales asignadas aumenta mi confianza al hablar.				
28. Tomar notas durante la clase me da seguridad.				
29. Me esmero en escuchar atentamente a los compañeros que participan durante la clase.				
30. Copiar las actividades de mis compañeros me resulta cómodo.				
31. Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.				
32. Estudio los materiales que me da la maestra, aunque no sean de mi interés.				
33. Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.				
34. Hago todos los ejercicios de escritura, aunque tenga que dedicarles mucho tiempo.				

35. Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.				
36. Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.				
37. Hablo en inglés con mis compañeros fuera de clase, aunque yo no me sienta seguro.				
38. Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo.				
39. Hago mis actividades, aunque tenga algún malestar.				
40. Estudio solamente para pasar los exámenes.				

#### Sección IV: Agencia en el propio aprendizaje

Después de leer con cuidado, selecciona SOLO una respuesta marcando con una cruz "X" la celda que mejor represente tu opinión.

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
41. Para mejorar mi inglés busco videos en internet.				
42. Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés.				
43. Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.				
44. Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés.				
45. En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.				
46. Tomo clases de inglés en otras instituciones para aprender inglés más rápido.				

47. Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.				
48. Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.				
49. Si me involucro en mi aprendizaje, mejoraré mi nivel de inglés.				
50. Tengo más independencia en mi aprendizaje si hay interacción virtual con otras personas.				
51. La confianza en mí mismo aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.				

**Tu participación es muy importante y se agradece mucho.**

Universidad Juárez Autónoma de Tabasco.

#### A4.

### Questions Found in the Literature Review. Attitudes Dimensions

Variables	Questions	Reference
I. Actitudes respecto al multilingüismo	Las personas que hablan más de un idioma tienen más amigos	(Baker, 1992; LoCastro, 2001)
	Hablar más de un idioma es una habilidad valiosa	(Cortés, 2002) (Jang, 2012)
	Hablar solo un idioma es inaceptable actualmente	
	Las personas que hablan más de un idioma tienen una visión más amplia del mundo	(Baker, 1992; Cortés, 2002; Jang, 2012) (Henry & Apeltgren, 2008; Wright, 1999)
	Si aprendes inglés es más que suficiente para tener éxito.	
	Se necesita aprender inglés solo para vivir en otro país.	
		Me gusta la idea de hablar español e inglés.
Las personas que hablan español e inglés tienen ventajas sobre los demás.		
	Admiro a las personas que hablan varios idiomas	(Henry & Apeltgren, 2008) (Baker, 1992)
	Hablar solo la lengua materna es suficiente para mí	
II. Actitudes hacia el aprendizaje de inglés	Me gusta el inglés	(Humphreys & Spratt, 2008)
	El inglés es un idioma importante en la actualidad.	(Humphreys & Spratt, 2008)
	El inglés es un idioma importante en México.	(Lynch & Klee, 2005)
	El inglés es un idioma bonito.	(Cooper & Fishman, 1977)
	El inglés se oye bien.	(Cid et al., 2009; Wright, 1999)
	Me gusta escuchar el inglés en canciones, películas, videos e internet, etc.	(Baker, 1992; LoCastro, 2001)
	Hay idiomas que son más útiles que el inglés.	(LoCastro, 2001)
	Hay otros idiomas que me gustan más que el inglés.	(Cid et al., 2009)
III. Actitudes hacia las clases de inglés	Las clases de inglés siempre están entre mis favoritas.	(Wright, 1999)
	Me gusta mucho aprender inglés.	(Cid et al., 2009)
	Aprender inglés es divertido.	(Cid et al., 2009; Henry & Apeltgren, 2008)
	Ojalá hubiera empezado a aprender inglés a una edad temprana.	(Gardner et al., 1997)
	Vale la pena el tiempo usado para aprender inglés.	(Gardner et al., 1997; LoCastro, 2001)
	Las clases de inglés son más entretenidas que otras clases.	(Cid et al., 2009)
	Lo que aprendo en las clases de inglés despierta mi interés.	(Gardner et al., 1997)
	Aprender inglés vale el esfuerzo que representa.	(Humphreys & Spratt, 2008)

**Table A4. (Continued)**

Variables	Questions	Reference
IV. Beneficio profesional	Es importante aprender inglés en mi carrera.	(Taylor & Marsden 2014)
	Es importante aprender más de un idioma en mi carrera.	(Taylor & Marsden 2014)
	Es importante aprender inglés para tener mejor preparación académica.	(Taylor & Marsden 2014)
	Saber inglés ayuda a obtener un trabajo mejor pagado.	(Taylor & Marsden 2014)
	Saber inglés permite tener mejores oportunidades de desarrollo profesional (becas, movilidad, lecturas científicas).	(Taylor & Marsden 2014)
	Necesitaré usar inglés en mi trabajo (para mi desarrollo profesional).	(Taylor & Marsden 2014)
	Merece la pena aprender inglés incluso cuando crea que nunca lo usaré en mi profesión.	(Taylor & Marsden 2014)
V. Desarrollo personal	Las personas que hablan inglés tienen más oportunidades en la vida que las personas que no lo hacen.	(Taylor & Marsden 2014)
	Aprender otro idioma puede ser una experiencia gratificante en sí misma.	(Taylor & Marsden 2014)
	Ser capaz de utilizar otro idioma es importante para mi futuro (profesional).	(Taylor & Marsden 2014)
	Aprender otros idiomas es una pérdida de tiempo.	(Taylor & Marsden 2014)
	Saber un idioma extranjero ayuda a las personas a sentirse mejor consigo mismas.	(Taylor & Marsden 2014)
	Merece la pena aprender un idioma extranjero incluso cuando crees que nunca lo vas a utilizar.	(Taylor & Marsden 2014)
	Los mexicanos deben aprender idiomas extranjeros.	(Taylor & Marsden 2014)
	Aprender idiomas es aburrido.	(Taylor & Marsden 2014)
	Todo el mundo debería ser capaz de utilizar al menos una lengua extranjera.	(Taylor & Marsden 2014)



A5.

**Questions Found in the Literature Review. Investment Dimensions**

Variables	Questions	References
<p><b>Motivation</b> It refers to an internal state that enables an action ("to learn") and involves understanding the factors that cause this state (Juexuan 2021). It can be viewed as a combination of reasons for behaving in a certain way, and intensity of behavior directed at attaining a specific goal Artamonova, 2021.</p>	Me interesa tener los materiales preparados para la clase.	(King et al, 2019)
	Soy muy perseverante para completar mis actividades de la clase de inglés.	(De la Cruz et al 2017)
	Olvido el tiempo cuando lo dedico a mis actividades de inglés.	(De la Cruz et al 2017)
	Disfruto resolviendo los ejercicios.	(De la Cruz et al 2017)
	Creo que hablar inglés frente a los compañeros de clase me causa inquietud	(De la Cruz et al 2017)
	Reconozco que aprender inglés implica un esfuerzo	(De la Cruz et al 2017; Artamonova, 2020)
	Me entusiasma mucho aprender inglés.	(De la Cruz et al 2017; Artamonova, 2020)
	Disfruto mucho realizando las actividades.	(De la Cruz et al 2017)
	Me enorgullece poder concluir las actividades de clase con éxito.	(De la Cruz et al 2017)
	Me interesa estudiar inglés más que otras materias.	(Soltanian, et al 2018; Artamonova, 2020)
Creo que la inversión de tiempo y dinero para aprender inglés valen la pena	(Soltanian et al, 2018; Artamonova, 2020)	
<p><b>Necessities</b> Learners have social, family, educational and linguistic needs that change according to context and over time (Norton, 2013). There are personal and professional needs for interest in learning, personal interests, educational opportunities or professional development (Carlioni et al., 2019; Norton et al, 2018).</p>	El inglés es útil para comunicarme con otras personas.	(Taylor & Marsden 2014)
	para interactuar con personas de otras culturas.	(Taylor & Marsden 2014)
	para integrarse a comunidades de otros países.	(Taylor & Marsden 2014)
	para obtener una beca para estudiar en otro país.	(Taylor & Marsden 2014)
	tener acceso a la información actualizada que se publica en inglés.	(Soltanian, et al 2018)
	para conseguir un buen trabajo.	(Taylor & Marsden 2014)
	para tener oportunidades de trabajo en otro país.	(Taylor & Marsden, 2014 ;Artamonova, 2020)
	para usar la tecnología y videojuegos con mayor facilidad.	(Soltanian, et al 2018)
para ganar más dinero demostrando más competencias.	(Soltanian, et al 2018)	

**Table A5. (Continued)**

Variables	Questions	References
Engagement It refers to the amount (quantity) and type (quality) of learners' active participation and involvement in a language learning task or activity (Hiver et al 2021). It is also defined as a learner's purposeful behavior in investing effort, pursuing goals, and taking action to learn. (Angelovska et al, 2021)	21. Asistir regularmente a clase de inglés es importante para mí.	(King et al, 2019)
	22. Tener los materiales que necesito para la clase es una prioridad para mí. King et al, 2019	(King et al, 2019)
	23. Hacer los trabajos que se asignan durante la clase me hace sentir bien.	(King et al, 2019)
	24. Hacer los trabajos que se asignan como tareas me es útil para repasar. King et al, 2019	(King et al, 2019)
	25. Poner atención a las explicaciones del profesor me es necesario. King et al, 2019	(King et al, 2019)
	26. Realizar las actividades escritas que asigna la maestra me resulta útil. King et al, 2019	(King et al, 2019)
	27. Participar en las actividades orales asignadas aumenta mi confianza al hablar.	
	28. Tomar notas durante la clase me da seguridad. King et al, 2019	(King et al, 2019)
	29. Escuchar atentamente a los compañeros que participan es importante para mí. King et al, 2019	(King et al, 2019)
	30. Copiar las actividades de mis compañeros me resulta fácil.	
	Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.	
	Estudio los materiales que me da la maestra, aunque no sean de mi interés.	
	Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.	(King et al, 2019)
	Hago todos los ejercicios de escritura, aunque tenga que dedicarles mucho tiempo.	(King et al, 2019)
	Hablar inglés durante la clase me hace sentir bien.	(Soltanian, et al 2018)
Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.		
Hablo en inglés con mis compañeros fuera de clase, aunque yo no me sienta seguro.;	(Yesilcinar, 2021; Soltanian, et al 2018)	
Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo.	(Yesilcinar, 2021)	
Hago mis actividades, aunque tenga algún malestar.	(De la Cruz et al 2017)	
Estudio lo necesario para pasar los exámenes.	(Soltanian, et al 2018)	

**Table A5. (Continued)**

Variables	Questions	References
Agency Involves actions, “those where the student contributes actively to shape [his or her] own learning thereby enhancing their investment in the process” (Harrison et al., 2013)	Para mejorar mi inglés busco videos en internet.	(King et al, 2019)
	Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés.	(King et al, 2019)
	Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.	(King et al, 2019)
	Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés.	(Soltanian, et al 2018)
	En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.	(King et al, 2019)
	Tomo clases de inglés en otras instituciones para aprender inglés más rápido.	(Soltanian, et al 2018)
	Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.	(Soltanian, et al 2018)
	Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.	(Soltanian, et al 2018)
	Si me involucro en mi aprendizaje, mejoraré mi nivel.	
	Tengo más independencia si hay interacción virtual con otras personas.	(Soltanian, et al 2018)
	Mi confianza aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.	(Soltanian, et al 2018)

## Appendix B

### Content Validation.

**Table B.1 Cuestionario de inversión en el aprendizaje**

#### Objetivo

El propósito del presente documento es la validación de los ítems que constituyen el cuestionario de opinión de inversión en el aprendizaje del inglés como lengua extranjera por parte de estudiantes de educación superior. La inversión se ha definido como la voluntad y el esfuerzo de los alumnos por facilitar su aprendizaje de idiomas para obtener un buen rendimiento

#### Descripción y procedimiento

El cuestionario consta de cuatro secciones. Al inicio de cada sección se presenta la definición de la dimensión que se aborda. Debajo de la definición se encuentra el encabezado con las opciones de la escala, las cuales el experto no debe responder.

La escala consta de cuatro puntos que son:

- En desacuerdo
- Parcialmente en desacuerdo
- Parcialmente de acuerdo
- De acuerdo
- Al leer los ítems, por favor marque los errores de ortografía y sintaxis que encuentre.
- Posteriormente marque Si o No en las columnas correspondientes en relación a la congruencia del ítem con la dimensión y la facilidad de comprensión de los mismos.
- De considerarlo necesario agradeceremos sus comentarios en la última columna de la derecha.

#### Información

El objetivo de este cuestionario es obtener información relacionada con tu propia experiencia aprendiendo otro idioma y lo que haces personalmente para aprenderlo. Es parte de un proyecto de investigación que se lleva a cabo en la Escuela Normal de Educación Especial. Toda la información que proporciones será manejada de forma anónima y confidencial. No será compartida con el personal de la escuela ni cualquier otra persona.

Si tienes alguna pregunta puedes contactar a la persona responsable:

Leonor Dauzón Ledesma

Correo: tab02000001@normales.mx

**Sección 1**

La motivación se refiere a un **estado interno** que permite una acción ("aprender") e implica la comprensión de los factores que causan este estado (Juexuan 2021). Puede considerarse como una **combinación de razones para comportarse de una determinada manera** y de intensidad de la conducta dirigida a la consecución de un objetivo específico (Artamonova, 2021).

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo	Congruencia del ítem con la dimensión		El ítem es de fácil comprensión		Comentarios
					Si	No	Si	No	
1. Me interesa tener los materiales preparados para la clase. King et al, 2019									
2. Soy muy perseverante para completar mis actividades de la clase de inglés. De la Cruz et al 2017.									
3. Olvido el tiempo cuando lo dedico a mis actividades de inglés. De la Cruz et al 2017.									
4. Disfruto resolviendo los ejercicios. De la Cruz et al 2017.									
5. Creo que hablar inglés frente a los compañeros de clase me causa inquietud									
6. Reconozco que aprender inglés implica un esfuerzo De la Cruz et al 2017.									
7. Me entusiasma mucho aprender inglés. De la Cruz et al 2017; Artamonova, 2020.									
8. Disfruto mucho realizando las actividades. De la Cruz et al 2017.									
9. Me enorgullece poder concluir las actividades									

de clase con éxito. De la Cruz et al 2017.									
10. Me interesa estudiar inglés más que otras materias. Soltanian, et al 2018; Artamonova, 2020									
11. Creo que la inversión de tiempo y dinero para aprender inglés valen la pena Soltanian et al, 2018; Artamonova, 2020									
<b>Sección 2</b>									
Los alumnos tienen necesidades sociales, familiares, educativas y lingüísticas que cambian según el contexto y a través del tiempo. (Norton, 2013). Existen necesidades personales y profesionales para interesarse en el aprendizaje, intereses personales, oportunidades educativas o desarrollo profesional (Carlioni et al., 2019; Norton et al, 2018).									
	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo	Congruencia del ítem con la dimensión		El ítem es de fácil comprensión		Comentarios
El inglés es útil					Si	No	Si	No	
12. para comunicarme con otras personas. Taylor & Marsden, 2014									
13. para interactuar con personas de otras culturas. Taylor & Marsden, 2014									
14. para integrarse a comunidades de otros países. Taylor & Marsden, 2014									
15. para obtener una beca para estudiar en otro país. Taylor & Marsden, 2014									
16. tener acceso a la información actualizada que se publica en inglés. Soltanian, et al 2018									
17. para conseguir un buen trabajo. Taylor & Marsden, 2014									
18. para tener oportunidades de									

trabajo en otro país. Taylor & Marsden, 2014; Artamonova, 2020.									
19. para usar la tecnología y videojuegos con mayor facilidad. Soltanian, et al 2018									
20. para ganar más dinero demostrando más competencias. Soltanian, et al 2018									
<b>Sección 3</b>									
El compromiso (engagement) se refiere a la cantidad (cantidad) y al tipo (calidad) de la participación activa y la implicación de los alumnos en una tarea o actividad de aprendizaje de idiomas (Hiver et al 2021). También se define como el comportamiento intencionado de un alumno que invierte esfuerzos, persigue objetivos y actúa para aprender. (Angelovska et al, 2021)									
	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo	Congruencia del ítem con la dimensión		El ítem es de fácil comprensión		Comentarios
					Si	No	Si	No	
21. Asistir regularmente a clase de inglés es importante para mí. King et al, 2019									
22. Tener los materiales que necesito para la clase es una prioridad para mí. King et al, 2019									
23. Hacer los trabajos que se asignan durante la clase me hace sentir bien.									
24. Hacer los trabajos que se asignan como tareas me es útil para repasar. King et al, 2019									
25. Poner atención a las explicaciones del profesor me es necesario. King et al, 2019									
26. Realizar las actividades escritas que asigna la maestra me									

resulta útil. King et al, 2019									
27. Participar en las actividades orales asignadas aumenta mi confianza al hablar.									
28. Tomar notas durante la clase me da seguridad. King et al, 2019									
29. Escuchar atentamente a los compañeros que participan es importante para mí. King et al, 2019									
30. Copiar las actividades de mis compañeros me resulta fácil.									
31. Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.									
32. Estudio los materiales que me da la maestra, aunque no sean de mi interés.									
33. Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí. King et al, 2019									
34. Hago todos los ejercicios de escritura, aunque tenga que dedicarles mucho tiempo. King et al, 2019									
35. Hablar inglés durante la clase me hace sentir bien. Soltanian, et al 2018									
36. Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.									
37. Hablo en inglés con mis compañeros fuera de clase, aunque yo no me sienta seguro.									



Yesilcinar, 2021; Soltanian, et al 2018.									
38. Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo. Yesilcinar, 2021									
39. Hago mis actividades, aunque tenga algún malestar. De la Cruz et al 2017.									
40. Estudio lo necesario para pasar los exámenes. Soltanian, et al 2018									
<b>Sección 4</b>									
Las acciones de agencia son aquellas en las que el estudiante contribuye activamente a dar forma a su propio aprendizaje, aumentando así su inversión en el proceso" (Harrison et al., 2013)									
	En desacuerdo	Parcialmente en	Parcialmente de acuerdo	De acuerdo	Congruencia del ítem con la dimensión		El ítem es de fácil comprensión		Comentarios
					Si	No	Si	No	
41. Para mejorar mi inglés busco videos en internet. King et al., 2019									
42. Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés. King et al., 2019									
43. Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva. King et al., 2019									
44. Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés. Soltanian, et al 2018									
45. En mi tiempo libre escucho canciones en									

inglés para mejorar mi inglés. King et al., 2019									
46. Tomo clases de inglés en otras instituciones para aprender inglés más rápido. Soltanian, et al 2018									
47. Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario. Soltanian, et al 2018									
48. Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés. Soltanian, et al 2018									
49. Si me involucro en mi aprendizaje, mejoraré mi nivel.									
50. Tengo más independencia si hay interacción virtual con otras personas. Soltanian, et al 2018									
51. Mi confianza aumenta cuando mejora mi nivel de desempeño comunicándome en inglés. Soltanian, et al 2018									

**Tu participación es muy importante y se agradece mucho.**

## Table B2 Interview Protocol

### Semi-structured Interview Protocol

The following procedure to conduct the interview will be described to guide the interviewer to standardize the data collection procedure, make it in an orderly manner, and control the timing of the interview.

#### Before the interview

1. The interviews will be online using Zoom and recorded with the authorization of the participant. The interview will take from 45 to 60 minutes.
2. At the beginning of the interview the participant's consent will be requested for the interview. Besides they were informed and gave their consent at the beginning of the study.
3. Contact information will be included and shared at the beginning of the interview.
4. If internet connection is lost due to unexpected problems such as rain or blackouts, the interview will be asked to wait for a while (15 min) for reconnection. If it is not possible, it will be rescheduled to finish the interview.
5. The participants for the interview are going to be selected based on the answers to the questionnaire.
6. An appointment for each participant will be made and they will be asked to be in a quiet and private place to avoid interruptions.

#### During the interview

1. At the beginning of the interview the participant will be greeted.
2. The interviewer will project the text and explain that the purpose is to clarify and/or expand the answers of the written questionnaire.
3. Authorization to record the interview will be requested.
  - Buenos días. Gracias por aceptar esta entrevista.
  - ¿Me permites grabar la entrevista con fines de tener los datos para mi investigación?
4. If the participant does not accept to be recorded, the interview will be cancelled.
5. The participant will be given the following information:
  - El propósito de esta entrevista es comentar algunas respuestas y tener la oportunidad de ampliar los comentarios respecto a las preguntas anteriores eran de respuesta limitada. Ahora puedo escuchar tu opinión detallada.
  - Si en algún momento no te sientes cómoda(o) para continuar o no quieres responder alguna pregunta, estás en la libertad de hacerlo.

6. The participant is going to be presented a screen shot of his/her answers.
7. He/she is going to be allowed to read the answers for one or two minutes.
8. Then he/she is going to be provided with a statement and/or question
9. Questions for all the sections will be asked and when further information is considered necessary, the participant will be asked to expand his/her answer.

#### **After the interview**

1. The interviewer will indicate when the interview is over and thank the participant for helping.
2. If there are any questions the participant can contact the interviewer

#### **Attitudes questionnaire**

El objetivo de esta entrevista es ampliar la información relacionada con tu propia experiencia aprendiendo inglés y lo que haces personalmente para aprenderlo que nos diste en el cuestionario electrónico. Es parte de un proyecto de investigación que llevo a cabo en la Escuela Normal de Educación Especial para la realización de mis estudios de Doctorado en Educación en la Universidad Juárez Autónoma de Tabasco.

Te pedimos que por favor nos des **tu opinión sincera**. Te reiteramos que toda la información que proporciones será manejada de forma anónima y confidencial. No será compartida con ninguna otra persona.

Si tienes alguna pregunta puedes contactar a la persona responsable:

Leonor Dauzón Ledesma

Correo: [tab02000001@normales.mx](mailto:tab02000001@normales.mx)

¿Estás de acuerdo en que la información que nos brindes en esta entrevista sea considerada para el proyecto de investigación?

Si      No

#### **Section 1 Multilingualism**

**En esta sección del cuestionario pretendo entender tu opinión acerca del aprendizaje de diferentes lenguas.**

- La mayoría de tus respuestas dan una percepción positiva/ negativa hacia el aprendizaje de diferentes lenguas extranjeras ¿Por qué tienes esa percepción?

I. Actitudes respecto al multilingüismo	Totalmente en desacuerdo	Ligeramente en desacuerdo	Ligeramente de acuerdo	Totalmente de acuerdo
1. Las personas que hablan más de un idioma tienen más amigos				
2. Hablar más de un idioma es una habilidad valiosa				
3. Hablar solo un idioma es inaceptable actualmente				
4. Las personas que hablan más de un idioma tienen una visión más amplia del mundo				
5. Si aprendes inglés es más que suficiente para tener éxito.				
6. Se necesita aprender inglés solo para vivir en otro país.				
7. Me gusta la idea de hablar español e inglés.				
8. Las personas que hablan español e inglés tienen ventajas sobre los demás.				
9. Admiro a las personas que hablan varios idiomas				
10. Hablar solo la lengua materna es suficiente para mí				

Depending on the answers of the participant he/she will be asked follow up questions.

## Section 2. Learning English

En el caso específico de la tercera sección del cuestionario tus respuestas indican que te gusta/no te gusta aprender inglés

- ¿Por qué? /¿Me platicas a qué se debe?
- ¿Qué te gusta/no te gusta de aprender inglés?

III. Actitudes hacia el aprendizaje de inglés	Totalmente en desacuerdo	Ligeramente en desacuerdo	Ligeramente de acuerdo	Totalmente de acuerdo
19. Me gusta el inglés.				
20. El inglés es un idioma importante en la actualidad.				
21. El inglés es un idioma importante en México.				
22. El inglés es un idioma bonito.				
23. El inglés se oye bien.				
24. Me gusta escuchar el inglés en canciones, películas, videos e internet, etc.				
25. Hay idiomas que son más útiles que el inglés.				
26. Hay otros idiomas que me gustan más que el inglés.				

## Section 3. Attitudes towards English classes

Por tus respuestas me puedo dar cuenta que te agrada/no te agrada la clase de inglés.

- ¿Puedes leer tus respuestas y compartirme por qué te agrada/no te agrada tu clase de inglés?
- ¿Qué es lo que más te gusta/no te gusta de la clase de inglés?

IV. Actitudes hacia las clases de inglés	Totalmente en desacuerdo	Ligeramente en desacuerdo	Ligeramente de acuerdo	Totalmente de acuerdo
27. Las clases de inglés siempre están entre mis favoritas.				
28. Me gusta mucho aprender inglés.				
29. Aprender inglés es divertido.				
30. Ojalá hubiera empezado a aprender inglés a una edad temprana.				
31. Vale la pena el tiempo usado para aprender inglés.				
32. Las clases de inglés son más entretenidas que otras clases.				
33. Lo que aprendo en las clases de inglés despierta mi interés.				
34. Aprender inglés vale el esfuerzo que representa.				

#### Section 4. Professional development

En esta parte del cuestionario se puede ver que tu consideras que aprender inglés beneficiará /no beneficiará tu desarrollo profesional

- ¿Por qué opinas de esa manera?

V. Beneficio profesional	Totalmente en desacuerdo	Ligeramente en desacuerdo	Ligeramente de acuerdo	Totalmente de acuerdo
35. Es importante aprender inglés en mi carrera.				
36. Es importante aprender más de un idioma en mi carrera.				
37. Es importante aprender inglés para tener mejor preparación académica.				
38. Saber inglés ayuda a obtener un trabajo mejor pagado.				
39. Saber inglés permite tener mejores oportunidades de desarrollo profesional (becas, movilidad, lecturas científicas).				
40. Necesitaré usar inglés en mi trabajo (para mi desarrollo profesional).				
41. Merece la pena aprender inglés incluso cuando crea que nunca lo usaré en mi profesión.				

#### Section 5. Personal Benefit

En esta parte del cuestionario haces ver que saber inglés, favorece/ no favorece tu desarrollo personal

- ¿Me puedes explicar por qué consideras que saber inglés favorece/no favorece tu desarrollo personal?

VI. Desarrollo personal	Totalmente en desacuerdo	Ligeramente en desacuerdo	Ligeramente de acuerdo	Totalmente de acuerdo
42. Las personas que hablan inglés tienen más oportunidades en la vida que las personas que no lo hacen.				
43. Aprender otro idioma puede ser una experiencia gratificante en sí misma.				
44. Ser capaz de utilizar otro idioma es importante para mi futuro (profesional).				
45. Aprender otros idiomas es una pérdida de tiempo.				
46. Saber un idioma extranjero ayuda a las personas a sentirse mejor consigo mismas.				
47. Merece la pena aprender un idioma extranjero incluso cuando crees que nunca lo vas a utilizar.				
48. Los mexicanos deben aprender idiomas extranjeros.				
49. Aprender idiomas es aburrido.				
50. Todo el mundo debería ser capaz de utilizar al menos una lengua extranjera.				

#### Inversión en el aprendizaje del inglés

##### Sección 1 Motivation

En esta sección del cuestionario me interesa conocer tu motivación sobre el aprendizaje del inglés. Estas son las respuestas que nos diste.

1. Si el participante muestra una clara tendencia en su motivación, se preguntará:
  - Algo interesante es que las respuestas del cuestionario me dejan ver que tienes ganas/ no tienes ganas de aprender inglés, ¿Me puedes platicar a qué se debe?
2. Si el participante muestra respuestas contradictorias la pregunta será:
  - ¿Me puedes aclarar por qué en el cuestionario nos indicas que algunas cosas si te motivan y otras no te motivan para aprender inglés?

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
1. Me interesa tener los materiales preparados para la clase				
2. Soy muy perseverante para completar mis actividades de la clase de inglés.				
3. Disfruto el tiempo cuando lo dedico a mis actividades de inglés				
4. Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.				
5. Creo que hablar inglés frente a los compañeros de clase me causa nerviosismo.				
6. Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.				
7. Me entusiasma mucho aprender inglés.				
8. Me gusta realizar las actividades de inglés.				
9. Me enorgullece poder concluir las actividades de clase con éxito.				
10. Me interesa estudiar inglés más que otras materias.				
11. Creo que la inversión de tiempo y dinero para aprender inglés valen la pena				

### Section 2 Necessities

**En esta sección me interesa conocer la utilidad que le ves al inglés  
¿Consideras que el inglés es útil para ti/ustedes en tu/su vida cotidiana?**

- Si le parece útil y en el cuestionario también dice que sí
  - tus respuestas me llaman la atención porque en el cuestionario respondiste lo mismo, además de que lo que pusiste en el cuestionario ¿En que más te puede ayudar el inglés?**
- Si le parece útil y en el cuestionario dijo que no
  - tus respuestas me llaman la atención porque en el cuestionario respondiste lo contrario, ¿Me puedes explicar por qué se contradicen tus respuestas?**
- Si responde que no y en el cuestionario también dijo que no
  - De hecho, eso es lo que respondiste en el cuestionario**
- Si en la entrevista dice que no y en el cuestionario dice que sí
  - tus respuestas me llaman la atención porque en el cuestionario respondiste lo contrario, ¿Me puedes explicar por qué se contradicen tus respuestas?**

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
<b>El inglés me sirve</b>				
12. para comunicarme con otras personas.				
13. para interactuar con personas de otras culturas.				
14. para integrarme a comunidades de otros países.				
15. para obtener una beca para estudiar en otro país.				
16. tener acceso a la información actualizada que se publica en inglés.				
17. para conseguir un trabajo bien pagado.				
18. para tener oportunidades de trabajo en otro país.				
19. para usar la tecnología y videojuegos con mayor facilidad.				
20. para ganar más dinero demostrando más competencias que otros.				

### Section 3. Engagement

Respecto a tu compromiso para aprender inglés tus respuestas muestran

1. Si el participante muestra una clara tendencia en sus respuestas se preguntará:

- que te esfuerzas /no te esfuerzas por participar activamente en clase ¿Me puedes platicar por qué te esfuerzas /no te esfuerzas por participar en la clase?
2. Si la tendencia no es clara la pregunta será:
- que en algunas actividades te esfuerzas y en otras no. Lee tus respuestas cuidadosamente ¿Me puedes decir por qué?

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
21. Asistir regularmente a clase de inglés es importante para mí.				
22. Tener los materiales que necesito para la clase es una prioridad para mí.				
23. Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.				
24. Hacer los trabajos que se asignan como tareas me es útil para repasar.				
25. Poner atención a las explicaciones del profesor me es necesario.				
26. Realizar las actividades escritas que asigna la maestra me resulta útil.				
27. Participar en las actividades orales asignadas aumenta mi confianza al hablar.				
28. Tomar notas durante la clase me es útil.				
29. Me esmero en escuchar atentamente a mis compañeros que participan durante la clase.				
30. Copiar las actividades de mis compañeros me resulta cómodo.				
31. Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.				
32. Estudio los materiales que me da la maestra, aunque no sean de mi interés.				
33. Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.				
34. Hago todos los ejercicios de escritura, aunque tenga que dedicarles mucho tiempo.				
35. Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.				
36. Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.				
37. Hablo en inglés con mis compañeros fuera de clase, aunque yo no me sienta seguro.				
38. Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo.				
39. Hago mis actividades, aunque tenga algún malestar.				
40. Estudio solamente para pasar los exámenes.				

### Section 4. Agency



En esta sección respondiste que realizas / no realizas actividades fuera de clase para mejorar tu inglés ¿Por favor me explicas por qué lo haces así?

- ¿Qué opinas de reforzar tu aprendizaje realizando actividades fuera del salón de clase?
  1. Si lo hace,
- En el cuestionario tus respuestas indican que te involucras en actividades fuera del salón. De las actividades que se presentaron en el cuestionario ¿Cuáles son las que realizas con más frecuencia?
  2. Si no lo hace,
- ¿En el cuestionario tus respuestas indican que no realizas actividades fuera del salón, me puedes aclarar por qué no lo haces?

	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo
41. Para mejorar mi inglés busco videos en internet.				
42. Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés.				
43. Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.				
44. Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés.				
45. En mi tiempo libre escucho canciones bilingües para mejorar mi inglés.				
46. Tomo clases de inglés en otras instituciones para aprender inglés más rápido.				
47. Fuera de la clase uso aplicaciones en mi celular con frases en inglés para mejorar mi vocabulario.				
48. Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.				
49. Si me involucro en mi aprendizaje, mejorará mi nivel de inglés.				
50. Tengo más independencia en mi aprendizaje a la interacción virtual con otras personas.				
51. La confianza en mi mismo aumenta cuando mejoro mi nivel de desempeño comunicándome en inglés.				

Según el caso y las respuestas. concluding question

**Preguntas adicionales:**

1. En general ¿Cuál es tu opinión sobre aprender inglés?
2. Parece que las respuestas del cuestionario muestran que no te gusta el inglés? ¿Me puedes platicar por qué?
3. Parece que tus respuestas indican que te gusta aprender inglés. ¿Cuál ha sido la experiencia que te motiva tanto?
4. En el cuestionario respondiste..... ¿Me puedes explicar o dar ejemplos?
  - ¿Por qué piensas eso?
  - ¿Cuál es la razón de tu respuesta?

**Validación:**

1. ¿Alguna pregunta fue problemática? ¿Por qué?
2. ¿Alguna pregunta te pareció que no es clara? ¿Me indicas cuál? ¿Por qué razón?
3. ¿Qué le cambiarías a las preguntas de la entrevista para mejorarla?

**Table B3***Timeline to Design, Validate and Administer the Instruments*

	Aril/May	May				June				July
Survey design	Apr 26-May 3 1 week									
Attitudes scale questionnaire		May 16-26 2 weeks								
Investment scale questionnaire					May 26 – June 10 2 weeks					
Content validation (experts)							June 13-15 3 days			
Questionnaires piloting							June 16-17 2 days			
Interview design, protocol, and piloting							June 20-24 1 week			
Questionnaires corrections and administration							June 20-24 1 week			
Interviews								June 27-July 8 2 weeks		

## Investment Questionnaire Pilot Results

**Table B4**

*Percentages of Answers Test Section 1 Motivation*

Section 1 Motivation	Percentages			
	Totally disagree	Partially disagree	Partially agree	Totally agree
IQS1Q1 Me interesa tener los materiales preparados para la clase	0.00	2.44	26.86	70.73
IQS1Q2 Soy muy perseverante para completar mis actividades de la clase de inglés.	0.00	14.63	63.41	21.95
IQS1Q3 Disfruto el tiempo cuando lo dedico a mis actividades de inglés.	21.95	26.83	34.15	17.07
IQS1Q4 Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.	12.20	7.32	48.78	31.71
IQS1Q5 Creo que hablar inglés frente a los compañeros de clase me causa nerviosismo.	17.07	9.76	26.83	46.34
IQS1Q6 Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.	2.44	9.76	24.39	63.41
IQS1Q7 Me entusiasma mucho aprender inglés.	9.76	7.32	41.46	41.46
IQS1Q8 Me gusta realizar las actividades de inglés.	7.32	12.20	48.78	31.71
IQS1Q9 Me enorgullece poder concluir las actividades de clase con éxito.	2.44	2.44	19.51	75.61
IQS1Q10 Me interesa estudiar inglés más que otras materias.	9.76	26.83	46.34	17.07
IQS1Q11 Creo que la inversión de tiempo y dinero para aprender inglés valen la pena	0.00	7.32	31.71	60.98

**Table B5***Percentages of Answers Test Section 2 Necessities*

Section 2 Necessities	Percentages			
	Totally disagree	Partially disagree	Partially agree	Totally agree
IQS2Q1para comunicarme con otras personas.	0.00	0.00	17.07	82.93
IQS2Q2para interactuar con personas de otras culturas.	0.00	2.44	26.83	70.73
IQS2Q3para integrarme a comunidades de otros países.	0.00	4.88	17.07	78.05
IQS2Q4para obtener una beca para estudiar en otro país.	2.44	4.88	12.20	80.49
IQS2Q5tener acceso a la información actualizada que se publica en inglés	0.00	2.44	31.71	65.85
IQS2Q6para conseguir un trabajo bien pagado.	2.44	2.44	24.39	70.73
IQS2Q7para tener oportunidades de trabajo en otro país.	2.44	0.00	21.95	75.61
IQS2Q8para usar la tecnología y videojuegos con mayor facilidad.	9.76	4.88	48.78	36.59
IQS2Q9to earn more money by demonstrating more competencies than others.	4.88	4.88	36.59	53.66

**Table B6***Percentages of Answers Test Section 3 Engagement*

Section 3 Engagement	Percentages			
	Totally disagree	Partially disagree	Partially agree	Totally agree
IQS3Q1 Asistir regularmente a clase de inglés es importante para mí.	0.00	7.32	21.95	70.73
IQS3Q2 Tener los materiales que necesito para la clase es una prioridad para mí.	0.00	9.76	36.59	53.66
IQS3Q3 Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.	0.00	2.44	26.83	70.73
IQS3Q4 Hacer los trabajos que se asignan como tareas me es útil para repasar.	0.00	4.88	31.71	63.44
IQS3Q5 Poner atención a las explicaciones del profesor me es necesario.	0.00	0.00	12.20	87.80
IQS3Q6 Realizar las actividades escritas que asigna la maestra me resulta útil.	0.00	7.32	19.51	73.13
IQS3Q7 Participar en las actividades orales asignadas aumenta mi confianza al hablar.	4.88	4.88	36.59	53.66
IQS3Q8 Tomar notas durante la clase me da seguridad.	2.44	7.32	14.63	75.61
IQS3Q9 Me esmero en escuchar atentamente a los compañeros que participan durante la clase	0.00	9.76	46.34	43.90
IQS3Q10 Copiar las actividades de mis compañeros me resulta cómodo.	9.76	19.51	26.83	43.90
IQS3Q11 Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.	39.02	26.83	24.39	9.76
IQS3Q12 Estudio los materiales que me da la maestra, aunque no sean de mi interés.	9.76	26.83	39.02	24.39
IQS3Q13 Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.	2.44	2.44	39.02	56.10
IQS3Q14 Hago todos los ejercicios de escritura, aunque tenga que dedicarles mucho tiempo.	2.44	14.63	39.02	43.90
IQS3Q15 Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.	7.32	14.63	36.59	41.46

Section 3 Engagement	Percentages			
	Totally disagree	Partially disagree	Partially agree	Totally agree
IQS3Q16 Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.	0.00	2.44	31.71	65.85
IQS3Q17 Hablo en inglés con mis compañeros fuera de clase, aunque yo no me siento seguro.	56.10	29.27	7.32	7.32
IQS3Q18 Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo.	48.78	29.27	19.51	2.44
IQS3Q19 Hago mis actividades, aunque tenga algún malestar.	12.20	19.51	26.83	41.46
IQS3Q20 Estudio solamente para pasar los exámenes.	2.44	12.20	41.46	43.90

**Table B7***Percentages of Answers Test Section 4 Agency*

Section 4 Agency	Percentages			
	Totally disagree	Totally disagree	Partially agree	Totally agree
IQS4Q1 Para mejorar mi inglés busco videos en internet.	24.39	17.07	21.95	36.59
IQS4Q2 Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés.	29.77	26.83	31.71	12.20
IQS4Q3 Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.	17.07	9.76	31.71	41.46
IQS4Q4 Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés.	85.37	4.88	7.32	2.44
IQS4Q5 En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.	17.17	4.88	29.27	48.78
IQS4Q6 Tomo clases de inglés en otras instituciones para aprender inglés más rápido.	85.37	7.32	4.88	2.44
IQS4Q7 Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.	43.90	21.95	26.83	7.32
IQS4Q8 Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.	19.51	17.07	21.95	41.46
IQS4Q9 Si me involucro en mi aprendizaje, mejoraré mi nivel de inglés.	0.00	7.32	19.51	73.17
IQS4Q10 Tengo más independencia en mi aprendizaje si hay interacción virtual con otras personas.	19.51	29.27	28.63	24.39
IQS4Q11 La confianza en mí mismo aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.	7.32	7.32	26.83	58.54

## Appendix C

### Investment Questionnaire (Pilot) Normality Test

**Table C1**

*Normality Test. Section 1 Motivation*

Section 1 Motivation	Test Version	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
IQS1Q1Me interesa tener los materiales preparados para la clase	Version 1	.440	22	.000
	Version 2	.430	19	.000
IQS1Q2Soy muy perseverante para completar mis actividades de la clase de inglés.	Version 1	.350	22	.000
	Version 2	.300	19	.000
IQS1Q3Disfruto el tiempo cuando lo dedico a mis actividades de inglés	Version 1	.265	22	.000
	Version 2	.188	19	.076
IQS1Q4Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.	Version 1	.322	22	.000
	Version 2	.277	19	.000
IQS1Q5Creo que hablar inglés frente a los compañeros de clase me causa nerviosismo.	Version 1	.299	22	.000
	Version 2	.270	19	.001
IQS1Q6Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.	Version 1	.392	22	.000
	Version 2	.377	19	.000
IQS1Q7Me entusiasma mucho aprender inglés.	Version 1	.322	22	.000
	Version 2	.304	19	.000
IQS1Q8Me gusta realizar las actividades de inglés.	Version 1	.318	22	.000
	Version 2	.242	19	.005
IQS1Q9Me enorgullece poder concluir las actividades de clase con éxito.	Version 1	.424	22	.000
	Version 2	.482	19	.000
IQS1Q10Me interesa estudiar inglés más que otras materias.	Version 1	.257	22	.001
	Version 2	.275	19	.001
IQS1Q11Creo que la inversión de tiempo y dinero para aprender inglés valen la pena	Version 1	.439	22	.000
	Version 2	.348	19	.000



**Table C2***Normality Test. Section 2 Necessities*

Section 2 Necessities	Test Version	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
IQS2Q1para comunicarme con otras personas.	Version 1	.530	22	.000
	Version 2	.456	19	.000
IQS2Q2para interactuar con personas de otras culturas.	Version 1	.430	22	.000
	Version 2	.443	19	.000
IQS2Q3para integrarme a comunidades de otros países.	Version 1	.463	22	.000
	Version 2	.470	19	.000
IQS2Q4para obtener una beca para estudiar en otro país.	Version 1	.515	22	.000
	Version 2	.437	19	.000
IQS2Q5tener acceso a la información actualizada que se publica en inglés	Version 1	.452	22	.000
	Version 2	.360	19	.000
IQS2Q6para conseguir un trabajo bien pagado.	Version 1	.370	22	.000
	Version 2	.482	19	.000
IQS2Q7para tener oportunidades de trabajo en otro país.	Version 1	.430	22	.000
	Version 2	.482	19	.000
IQS2Q8para usar la tecnología y videojuegos con mayor facilidad.	Version 1	.303	22	.000
	Version 2	.256	19	.002
IQS2Q9to earn more money by demonstrating more competencies than others.	Version 1	.315	22	.000
	Version 2	.307	19	.000

**Table C3***Normality Test Section 3 Engagement*

Section 3 Engagement	Test Version	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
IQS3Q1 Asistir regularmente a clase de inglés es importante para mí.	Version 1	.413	22	.000
	Version 2	.456	19	.000
IQS3Q2 Tener los materiales que necesito para la clase es una prioridad para mí.	Version 1	.309	22	.000
	Version 2	.360	19	.000
IQS3Q3 Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.	Version 1	.416	22	.000
	Version 2	.456	19	.000
IQS3Q4 Hacer los trabajos que se asignan como tareas me es útil para repasar.	Version 1	.387	22	.000
	Version 2	.403	19	.000
IQS3Q5 Poner atención a las explicaciones del profesor me es necesario.	Version 1	.530	22	.000
	Version 2	.505	19	.000
IQS3Q6 Realizar las actividades escritas que asigna la maestra me resulta útil.	Version 1	.437	22	.000
	Version 2	.443	19	.000
IQS3Q7 Participar en las actividades orales asignadas aumenta mi confianza al hablar.	Version 1	.319	22	.000
	Version 2	.301	19	.000
IQS3Q8 Tomar notas durante la clase me da seguridad.	Version 1	.477	22	.000
	Version 2	.413	19	.000
IQS3Q9 Me esmero en escuchar atentamente a los compañeros que participan durante la clase	Version 1	.301	22	.000
	Version 2	.263	19	.001
IQS3Q10 Copiar las actividades de mis compañeros me resulta cómodo.	Version 1	.239	22	.002
	Version 2	.284	19	.000
IQS3Q11 Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.	Version 1	.245	22	.001
	Version 2	.223	19	.014
IQS3Q12 Estudio los materiales que me da la maestra, aunque no sean de mi interés.	Version 1	.212	22	.012
	Version 2	.243	19	.004
IQS3Q13 Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.	Version 1	.393	22	.000
	Version 2	.310	19	.000
IQS3Q14 Hago todos los ejercicios de escritura, aunque tenga que dedicarles mucho tiempo.	Version 1	.362	22	.000
	Version 2	.262	19	.001
	Version 1	.265	22	.000

Section 3 Engagement	Test Version	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
IQS3Q15 Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.	Version 2	.216	19	.020
	Version 1	.440	22	.000
IQS3Q16 Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.	Version 2	.376	19	.000
	Version 1	.295	22	.000
IQS3Q17 Hablo en inglés con mis compañeros fuera de clase, aunque yo no me sienta seguro.	Version 2	.358	19	.000
	Version 1	.310	22	.000
IQS3Q18 Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo.	Version 2	.279	19	.000
	Version 1	.245	22	.001
IQS3Q19 Hago mis actividades, aunque tenga algún malestar.	Version 2	.245	19	.004
	Version 1	.240	22	.002
IQS3Q20 Estudio solamente para pasar los exámenes.	Version 2	.296	19	.000

**Table C4***Normality Test Section 4 Agency*

Section 4 Agency	Test Version	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
IQS4Q1 Para mejorar mi inglés busco videos en internet.	Version 1	.256	22	.001
	Version 2	.235	19	.007
IQS4Q2 Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés.	Version 1	.267	22	.000
	Version 2	.233	19	.008
IQS4Q3 Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.	Version 1	.260	22	.000
	Version 2	.304	19	.000
IQS4Q4 Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés.	Version 1	.477	22	.000
	Version 2	.525	19	.000
IQS4Q5 En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.	Version 1	.341	22	.000
	Version 2	.273	19	.001
IQS4Q6 Tomo clases de inglés en otras instituciones para aprender inglés más rápido.	Version 1	.450	22	.000
	Version 2	.538	19	.000
IQS4Q7 Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.	Version 1	.253	22	.001
	Version 2	.296	19	.000
IQS4Q8 Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.	Version 1	.243	22	.002
	Version 2	.253	19	.002
IQS4Q9 Si me involucro en mi aprendizaje, mejoraré mi nivel de inglés.	Version 1	.440	22	.000
	Version 2	.442	19	.000
IQS4Q10 Tengo más independencia en mi aprendizaje si hay interacción virtual con otras personas.	Version 1	.197	22	.026
	Version 2	.173	19	.138
IQS4Q11 La confianza en mí mismo aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.	Version 1	.374	22	.000
	Version 2	.298	19	.000

**Table C5***Normality Test per Dimension*

Dimensions	Test	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
Motivation	Version 1	.199	22	.024
	Version 2	.185	19	.086
Agency	Version 1	.241	22	.002
	Version 2	.119	19	.200*
Necessity	Version 1	.174	22	.083
	Version 2	.289	19	.000
Engagement	Version 1	.207	22	.015
	Version 2	.162	19	.200*

## Appendix D

### Investment Questionnaire (Pilot) Non-parametric Analyses for Independent Samples

**Table D1**

*Stability of Answers. Kruskal-Wallis Test. Section 1 Motivation*

	Kruskal-Wallis H	df	Asymp. Sig.
IQS1Q1Me interesa tener los materiales preparados para la clase	.178	1	.673
IQS1Q2Soy muy perseverante para completar mis actividades de la clase de inglés.	.097	1	.756
IQS1Q3Disfruto el tiempo cuando lo dedico a mis actividades de inglés	.346	1	.557
IQS1Q4Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.	.518	1	.472
IQS1Q5Creo que hablar inglés frente a los compañeros de clase me causa nerviosismo.	.007	1	.935
IQS1Q6Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.	.088	1	.767
IQS1Q7Me entusiasma mucho aprender inglés.	.936	1	.333
IQS1Q8Me gusta realizar las actividades de inglés.	.127	1	.722
IQS1Q9Me enorgullece poder concluir las actividades de clase con éxito.	.460	1	.497
IQS1Q10Me interesa estudiar inglés más que otras materias.	.759	1	.384
IQS1Q11Creo que la inversión de tiempo y dinero para aprender inglés valen la pena	1.060	1	.303

a. Kruskal Wallis Test

b. Grouping Variable: Test Version

**Table D2***Stability of Answers. Kruskal-Wallis Test. Section 2 Necessities*

	Kruskal-Wallis H	df	Asymp. Sig.
IQS2Q1para comunicarme con otras personas.	1.864	1	.172
IQS2Q2para interactuar con personas de otras culturas.	.000	1	.988
IQS2Q3para integrarme a comunidades de otros países.	.038	1	.846
IQS2Q4para obtener una beca para estudiar en otro país.	1.180	1	.277
IQS2Q5tener acceso a la información actualizada que se publica en inglés	.904	1	.342
IQS2Q6para conseguir un trabajo bien pagado.	1.630	1	.202
IQS2Q7para tener oportunidades de trabajo en otro país.	1.298	1	.254
IQS2Q8para usar la tecnología y videojuegos con mayor facilidad.	.712	1	.399
IQS2Q9to earn more money by demonstrating more competencies than others.	.058	1	.810

a. Kruskal Wallis Test

b. Grouping Variable: Test Version

**Table D3***Stability of Answers. Kruskal-Wallis Test. Section 3 Engagement*

	Kruskal-Wallis H	df	Asymp . Sig.
IQS3Q3 Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.	.214	1	.644
IQS3Q4 Hacer los trabajos que se asignan como tareas me es útil para repasar.	.034	1	.853
IQS3Q5 Poner atención a las explicaciones del profesor me es necesario.	.417	1	.519
IQS3Q6 Realizar las actividades escritas que asigna la maestra me resulta útil.	.018	1	.893
IQS3Q7 Participar en las actividades orales asignadas aumenta mi confianza al hablar.	.011	1	.918
IQS3Q8 Tomar notas durante la clase me da seguridad.	.757	1	.384
IQS3Q9 Me esmero en escuchar atentamente a los compañeros que participan durante la clase	.319	1	.572
IQS3Q10 Copiar las actividades de mis compañeros me resulta cómodo.	.016	1	.901
IQS3Q11 Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.	.109	1	.742
IQS3Q12 Estudio los materiales que me da la maestra, aunque no sean de mi interés.	.075	1	.784
IQS3Q13 Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.	2.418	1	.120
IQS3Q14 Hago todos los ejercicios de escritura, aunque tenga que dedicarles mucho tiempo.	4.873	1	.027
IQS3Q15 Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.	1.010	1	.315
IQS3Q16 Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.	.730	1	.393
IQS3Q17 Hablo en inglés con mis compañeros fuera de clase, aunque yo no me sienta seguro.	.648	1	.421
IQS3Q18 Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo.	.020	1	.887
IQS3Q19 Hago mis actividades, aunque tenga algún malestar.	.005	1	.945
IQS3Q20 Estudio solamente para pasar los exámenes.	.375	1	.540

a. Kruskal Wallis Test

b. Grouping Variable: Test Version



**Table D4***Stability of Answers. Kruskal-Wallis Test. Section 4 Agency*

	Kruskal-Wallis H	df	Asymp. Sig.
IQS4Q1Para mejorar mi inglés busco videos en internet.	.001	1	.979
IQS4Q2Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés.	4.491	1	.034
IQS4Q3Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.	2.203	1	.138
IQS4Q4Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés.	.074	1	.786
IQS4Q5En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.	1.848	1	.174
IQS4Q6Tomo clases de inglés en otras instituciones para aprender inglés más rápido.	2.475	1	.116
IQS4Q7Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.	1.154	1	.283
IQS4Q8Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.	.119	1	.730
IQS4Q9Si me involucro en mi aprendizaje, mejoraré mi nivel de inglés.	.002	1	.961
IQS4Q10Tengo más independencia en mi aprendizaje si hay interacción virtual con otras personas.	.033	1	.855
IQS4Q11La confianza en mí mismo aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.	.297	1	.586

a. Kruskal Wallis Test

b. Grouping Variable: Test Version

**Table D5**

*Stability of Answers. Kruskal-Wallis Test. Per Dimension (Pilot)*

	Kruskal- Wallis H	df	Asymp. Sig.
Motivation	.004	1	.950
Necessity	.053	1	.819
Engagement	2.078	1	.149
Agency	2.145	1	.143

a. Kruskal Wallis Test

b. Grouping Variable: Test Version

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## Appendix E

### Investment Questionnaire (Pilot) Reliability.

**Table E1**

*Internal consistency. Cronbach Alpha Section 1*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items
.881	.885		9

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS1Q1Me interesa tener los materiales preparados para la clase	25.17	25.118	.484	.383	.880
IQS1Q3Disfruto el tiempo cuando lo dedico a mis actividades de inglés	26.33	23.154	.370	.244	.897
IQS1Q4Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.	25.86	20.808	.720	.830	.859
IQS1Q6Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.	25.33	21.593	.801	.757	.854
IQS1Q7Me entusiasma mucho aprender inglés.	25.67	20.325	.801	.729	.851
IQS1Q8Me gusta realizar las actividades de inglés.	25.79	20.758	.830	.875	.849
IQS1Q9Me enorgullece poder concluir las actividades de clase con éxito.	25.14	24.125	.539	.529	.875

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS1Q10 Me interesa estudiar inglés más que otras materias.	26.10	21.259	.723	.642	.859
IQS1Q11 Creo que la inversión de tiempo y dinero para aprender inglés valen la pena	25.29	24.551	.478	.551	.879

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**Table E2***Internal consistency. Cronbach Alpha Section 2*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items
.779	.795		8

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS2Q1para comunicarme con otras personas.	24.90	9.308	.495	.572	.762
IQS2Q2para interactuar con personas de otras culturas.	25.07	9.141	.368	.508	.772
IQS2Q4para obtener una beca para estudiar en otro país.	25.02	7.731	.642	.610	.727
IQS2Q5tener acceso a la información actualizada que se publica en inglés	25.10	9.259	.322	.236	.778
IQS2Q6para conseguir un trabajo bien pagado.	25.10	8.137	.540	.433	.745
IQS2Q7para tener oportunidades de trabajo en otro país.	25.02	7.780	.738	.652	.715
IQS2Q8para usar la tecnología y videojuegos con mayor facilidad.	25.62	7.754	.413	.320	.779
IQS2Q9to earn more money by demonstrating more competencies than others.	25.33	7.789	.485	.389	.757

**Table E3***Internal consistency. Cronbach Alpha Section 3*

Cronbach's Alpha	Cronbach's Alpha Based on	
	Standardized Items	N of Items
.853	.868	12

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS3Q1Asistir regularmente a clase de inglés es importante para mí.	38.37	22.738	.602	.584	.837
IQS3Q2Tener los materiales que necesito para la clase es una prioridad para mí.	38.56	22.202	.638	.582	.834
IQS3Q3Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.	38.32	23.172	.649	.579	.837
IQS3Q4Hacer los trabajos que se asignan como tareas me es útil para repasar.	38.41	24.049	.397	.367	.850
IQS3Q5Poner atención a las explicaciones del profesor me es necesario.	38.12	25.310	.384	.430	.852
IQS3Q6Realizar las actividades escritas que asigna la maestra me resulta útil.	38.34	22.180	.712	.679	.830
IQS3Q8Tomar notas durante la clase me da seguridad.	38.37	22.388	.544	.607	.841

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS3Q13Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.	38.51	21.706	.721	.633	.828
IQS3Q15Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.	38.88	21.110	.555	.577	.842
IQS3Q16 Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.	38.37	24.088	.441	.523	.847
IQS3Q19Hago mis actividades, aunque tenga algún malestar.	39.02	21.924	.368	.262	.864
IQS3Q20Estudio solamente para pasar los exámenes.	38.73	21.951	.571	.455	.839

**Table E4***Internal consistency. Cronbach Alpha Section 4*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.729	.746	7

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS4Q1Para mejorar mi inglés busco videos en internet.	17.98	15.341	.333	.191	.728
IQS4Q3Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.	17.71	14.746	.472	.490	.689
IQS4Q5En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.	17.62	14.485	.510	.411	.679
IQS4Q7Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.	18.76	16.039	.359	.168	.716
IQS4Q8Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.	17.83	14.825	.417	.360	.705
IQS4Q9Si me involucro en mi aprendizaje, mejoraré mi nivel de inglés.	17.05	17.266	.458	.532	.705



	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlatio n	Squared Multiple Correlatio n	Cronbach' s Alpha if Item Deleted
IQS4Q11La confianza en mí mismo aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.	17.33	14.618	.650	.643	.653

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## Appendix F

### Correlation

**Table F**

*Correlation Among Investment Dimensions*

Cronbach's Alpha	N of Items
.923	36

Spearman's rho		Motivation	Necessity	Engagement	Agency
Motivation	Correlation Coefficient	1.000	.179	.685**	.579**
	Sig. (1-tailed)	.	.128	.000	.000
	N	42	42	41	42
Necessity	Correlation Coefficient	.179	1.000	.434**	.486**
	Sig. (1-tailed)	.128	.	.002	.001
	N	42	42	41	42
Engagement	Correlation Coefficient	.685**	.434**	1.000	.662**
	Sig. (1-tailed)	.000	.002	.	.000
	N	41	41	41	41
Agency	Correlation Coefficient	.579**	.486**	.662**	1.000
	Sig. (1-tailed)	.000	.001	.000	.
	N	42	42	41	42

## Appendix G

### Investment Questionnaire (Final). Non-parametric for Independent Samples

**Table G1**

*Stability of Answers. Kruskal-Wallis Test. Section 1 Motivation*

	Kruskal-Wallis H	df	Asymp. Sig.
IQS1Q1Me interesa tener los materiales preparados para la clase	.491	1	.484
IQS1Q2Soy muy perseverante para completar mis actividades de la clase de inglés.	.007	1	.934
IQS1Q3Disfruto el tiempo cuando lo dedico a mis actividades de inglés	1.135	1	.287
IQS1Q4Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.	3.795	1	.051
IQS1Q5Creo que hablar inglés frente a los compañeros de clase me causa nerviosismo.	.596	1	.440
IQS1Q6Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.	.451	1	.502
IQS1Q7Me entusiasma mucho aprender inglés.	3.869	1	.049
IQS1Q8Me gusta realizar las actividades de inglés.	4.610	1	.032
IQS1Q9Me enorgullece poder concluir las actividades de clase con éxito.	5.801	1	.016
IQS1Q10Me interesa estudiar inglés más que otras materias.	3.727	1	.054
IQS1Q11Creo que la inversión de tiempo y dinero para aprender inglés valen la pena	1.768	1	.184

a. Kruskal Wallis Test

b. Grouping Variable: Version

**Table G2***Stability of Answers. Kruskal-Wallis Test. Section 2 Necessities*

	Kruskal-Wallis H	df	Asymp. Sig.
IQS2Q1para comunicarme con otras personas.	1.550	1	.213
IQS2Q2para interactuar con personas de otras culturas.	.000	1	.988
IQS2Q3para integrarme a comunidades de otros países.	.000	1	.988
IQS2Q4para obtener una beca para estudiar en otro país.	1.035	1	.309
IQS2Q5tener acceso a la información actualizada que se publica en inglés	1.919	1	.166
IQS2Q6para conseguir un trabajo bien pagado.	.017	1	.897
IQS2Q7para tener oportunidades de trabajo en otro país.	1.447	1	.229
IQS2Q8para usar la tecnología y videojuegos con mayor facilidad.	.434	1	.510
IQS2Q9para ganar más dinero demostrando más competencias que otros.	.240	1	.624

a. Kruskal Wallis Test

b. Grouping Variable: Version

**Table G3***Stability of Answers. Kruskal-Wallis Test. Section 3 Engagement*

	Kruskal-Wallis H	df	Asymp. Sig.
IQS3Q1Asistir regularmente a clase de inglés es importante para mí.	.651	1	.420
IQS3Q2Tener los materiales que necesito para la clase es una prioridad para mí.	.027	1	.868
IQS3Q3Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.	.956	1	.328
IQS3Q4Hacer los trabajos que se asignan como tareas me es útil para repasar.	.069	1	.793
IQS3Q5Poner atención a las explicaciones del profesor me es necesario.	.028	1	.868
IQS3Q6Realizar las actividades escritas que asigna la maestra me resulta útil.	.976	1	.323
IQS3Q7Participar en las actividades orales asignadas aumenta mi confianza al hablar.	.007	1	.935
IQS3Q8Tomar notas durante la clase me da seguridad.	.416	1	.519
IQS3Q9Me esmero en escuchar atentamente a los compañeros que participan durante la clase	.022	1	.883
IQS3Q10Copiar las actividades de mis compañeros me resulta cómodo.	.217		.641
IQS3Q11Esperar a que otros respondan lo que pide la maestra evita que yo me estrese.	3.587	1	.058
IQS3Q12Estudio los materiales que me da la maestra, aunque no sean de mi interés.	.551	1	.458
IQS3Q13Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.	.001	1	.977
IQS3Q15Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.	.091	1	.763

	Kruskal-Wallis H	df	Asymp. Sig.
IQS3Q16 Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.	.270	1	.603
IQS3Q17 Hablo en inglés con mis compañeros fuera de clase, aunque yo no me sienta seguro.	.836	1	.360
IQS3Q18 Hablo en inglés con la maestra fuera de clase, aunque me cueste trabajo.	.318	1	.573
IQS3Q19 Hago mis actividades, aunque tenga algún malestar.	3.141	1	.076
IQS3Q20 Estudio solamente para pasar los exámenes.	.015	1	.904

a. Kruskal Wallis Test

b. Grouping Variable: Version

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**Table G4***Stability of Answers. Kruskal-Wallis Test. Section 4 Agency*

	Kruskal-Wallis H	df	Asymp. Sig.
IQS4Q1 Para mejorar mi inglés busco videos en internet.	2.345	1	.126
IQS4Q3 Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.	1.331	1	.249
IQS4Q4 Participo en comunidades de jugadores de videojuegos en línea para practicar el inglés.	.428	1	.513
IQS4Q5 En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.	.120	1	.729
IQS4Q6 Tomo clases de inglés en otras instituciones para aprender inglés más rápido.	.005	1	.944
IQS4Q7 Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.	1.656	1	.198
IQS4Q8 Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.	4.759	1	.029
IQS4Q9 Si me involucro en mi aprendizaje, mejoraré mi nivel de inglés.	2.658	1	.103
IQS4Q10 Tengo más independencia en mi aprendizaje si hay interacción virtual con otras personas.	5.217	1	.022
IQS4Q11 La confianza en mí mismo aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.	.651	1	.420

a. Kruskal Wallis Test

b. Grouping Variable: Version

**Table G5***Normality Test Between Dimensions*

	Version	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Motivation	Version 1	.146	36	.052	.910	36	.006
	Version 2	.111	30	.200*	.978	30	.770
Necessities	Version 1	.169	36	.011	.877	36	.001
	Version 2	.192	30	.006	.865	30	.001
Engagement	Version 1	.189	36	.002	.822	36	.000
	Version 2	.221	30	.001	.770	30	.000
Agency	Version 1	.120	36	.200*	.965	36	.313
	Version 2	.173	30	.023	.967	30	.449

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**Table G6***Stability of answers by dimension*

	Motivation	Necessities	Engagement	Agency
Kruskal-Wallis H	6.421	.492	.040	.400
df	1	1	1	1
Asymp. Sig.	.011	.483	.841	.527

a. Kruskal Wallis Test

b. Grouping Variable: Version



## Appendix H

### Investment Questionnaire (Final). Reliability

**Table H1**

*Internal Consistency. Section 1 Motivation*

Cronbach's Alpha	Cronbach's Alpha Based on		N of Items
	Standardized Items		
.864	.866		9

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS1Q2 Soy muy perseverante para completar mis actividades de la clase de inglés.	26.05	14.875	.461	.419	.861
IQS1Q3 Disfruto el tiempo cuando lo dedico a mis actividades de inglés	26.23	13.440	.711	.665	.837
IQS1Q4 Disfruto resolviendo los ejercicios de inglés que nos deja la maestra.	26.15	13.146	.716	.737	.836
IQS1Q6 Reconozco que resolver las actividades de inglés me implica un esfuerzo que estoy dispuesto a hacer.	25.79	15.431	.502	.431	.858
IQS1Q7 Me entusiasma mucho aprender inglés.	25.91	13.992	.650	.551	.844
IQS1Q8 Me gusta realizar las actividades de inglés.	25.92	13.548	.726	.617	.836

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach' s Alpha if Item Deleted
IQS1Q9Me enorgullece poder concluir las actividades de clase con éxito.	25.65	14.877	.490	.377	.858
IQS1Q10Me interesa estudiar inglés más que otras materias.	26.48	14.038	.477	.337	.864
IQS1Q11Creo que la inversión de tiempo y dinero para aprender inglés valen la pena	25.76	14.402	.653	.563	.845

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**Table H2***Internal Consistency. Section 2 Necessities*

Cronbach's Alpha	Cronbach's Alpha Based on		Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach' s Alpha if Item Deleted
	Standardized Items	N of Items			
.859	.870	8			
	Scale Mean if Item Deleted	Scale Variance if Item Deleted			
IQS2Q1para comunicarme con otras personas.	24.62	11.808	.597	.557	.843
IQS2Q2para interactuar con personas de otras culturas.	24.52	12.284	.688	.640	.836
IQS2Q4para obtener una beca para estudiar en otro país.	24.42	13.233	.497	.417	.854
IQS2Q5tener acceso a la información actualizada que se publica en inglés	24.59	12.061	.621	.483	.840
IQS2Q6para conseguir un trabajo bien pagado.	24.74	11.271	.653	.515	.836
IQS2Q7para tener oportunidades de trabajo en otro país.	24.41	12.922	.604	.596	.846
IQS2Q8para usar la tecnología y videojuegos con mayor facilidad.	24.83	10.510	.750	.688	.823
IQS2Q9para ganar más dinero demostrando más competencias que otros.	24.92	10.933	.559	.585	.855

**Table H3***Internal Consistency. Section 3 Engagement*

Cronbach's Alpha	Cronbach's Alpha Based on		Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach' s Alpha if Item Deleted
	Standardized Items	N of Items			
.900	.909	12			
	Scale Mean if Item Deleted	Scale Variance if Item Deleted			
IQS3Q1Asistir regularmente a clase de inglés es importante para mí.	36.80	33.976	.635	.704	.891
IQS3Q2Tener los materiales que necesito para la clase es una prioridad para mí.	36.89	33.973	.644	.666	.891
IQS3Q3Lograr hacer bien los trabajos que me asignan durante la clase es un esfuerzo que vale la pena hacer.	36.73	33.124	.804	.780	.884
IQS3Q4Hacer los trabajos que se asignan como tareas me es útil para repasar.	36.77	33.655	.676	.873	.889
IQS3Q5Poner atención a las explicaciones del profesor me es necesario.	36.70	33.630	.686	.854	.889
IQS3Q6Realizar las actividades escritas que asigna la maestra me resulta útil.	36.77	33.132	.770	.746	.885
IQS3Q8Tomar notas durante la clase me da seguridad.	36.83	33.403	.687	.627	.889

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach' s Alpha if Item Deleted
IQS3Q13Me esfuerzo para completar los ejercicios de lectura, aunque sean difíciles para mí.	36.94	33.504	.714	.660	.888
IQS3Q15Me esfuerzo por hablar inglés durante la clase, aunque no me sienta seguro.	36.92	33.671	.624	.570	.892
IQS3Q16 Hago lo posible para entender lo que dicen los demás, aunque se me dificulte.	36.89	33.358	.677	.636	.889
IQS3Q19Hago mis actividades, aunque tenga algún malestar.	37.17	34.203	.529	.449	.897
IQS3Q20Estudio solamente para pasar los exámenes.	37.74	36.348	.214	.305	.919

**Table H4***Internal Consistency. Section 4 Agency*

Cronbach's Alpha	Cronbach's Alpha Based on		Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach' s Alpha if Item Deleted
	Standardized Items	N of Items			
.772	.770	8			
	Scale Mean if Item Deleted	Scale Variance if Item Deleted			
IQS4Q1Para mejorar mi inglés busco videos en internet.	20.80	16.130	.592	.430	.725
IQS4Q2Busco lecturas en inglés (internet, revistas o libros) para complementar lo que veo en la clase de inglés.	20.86	17.166	.462	.536	.749
IQS4Q3Veo películas con subtítulos en inglés para mejorar mi comprensión auditiva.	20.70	16.461	.573	.474	.729
IQS4Q5En mi tiempo libre escucho canciones en inglés para mejorar mi inglés.	20.41	17.138	.510	.404	.741
IQS4Q7Fuera de la clase uso aplicaciones en mi celular con juegos en inglés para mejorar mi vocabulario.	21.20	15.761	.555	.445	.732
IQS4Q8Si uso aplicaciones en dispositivos móviles puedo mejorar mi gramática en inglés.	20.58	18.217	.337	.348	.771

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IQS4Q9 Si me involucro en mi aprendizaje, mejoraré mi nivel de inglés.	20.14	18.889	.402	.459	.759
IQS4Q11 La confianza en mi mismo aumenta cuando mejora mi nivel de desempeño comunicándome en inglés.	20.24	19.017	.349	.325	.766

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## Appendix I

### Investment Questionnaire (Final). Correlation.

**Table I1**

*Correlation by Dimension*

		Motivation	Necessities	Engagement	Agency
Motivation	Correlation Coefficient	1.000	.422**	.550**	.408**
	Sig. (1-tailed)	.	.000	.000	.000
	N	66	66	66	66
Necessities	Correlation Coefficient	.422**	1.000	.488**	.386**
	Sig. (1-tailed)	.000	.	.000	.001
	N	66	66	66	66
Engagement	Correlation Coefficient	.550**	.488**	1.000	.339**
	Sig. (1-tailed)	.000	.000	.	.003
	N	66	66	66	66
Agency	Correlation Coefficient	.408**	.386**	.339**	1.000
	Sig. (1-tailed)	.000	.001	.003	.
	N	66	66	66	66



**Table I2**

*Correlation Between Investment and Attitudes Questionnaires*

		Motiv ation	Nec essi ties	Enga geme nt	Age ncy	Multi lingu alis m	Learni ng Englis h	Engli sh class	Profe ssion al benef it	Pers onal devel opme nt
Motivation	Pearso n Correla tion	1	.46 8**	.612**	.560* *	.087	.307**	.766* *	.426**	.504**
	Sig. (1- tailed)		.00 0	.000	.000	.244	.006	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Necessities	Pearso n Correla tion	.468*	1	.481**	.453* *	.273 *	.387**	.421* *	.523**	.451**
	Sig. (1- tailed)	.000		.000	.000	.013	.001	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Engagemen t	Pearso n Correla tion	.612**	.48 1**	1	.424* *	.051	.256* *	.497* *	.419**	.428**
	Sig. (1- tailed)	.000	.00 0		.000	.342	.019	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Agency	Pearso n Correla tion	.560**	.45 3**	.424**	1	.267 *	.373**	.579* *	.310**	.475**
	Sig. (1- tailed)	.000	.00 0	.000		.015	.001	.000	.006	.000
	N	66	66	66	66	66	66	66	66	66
Multilinguali sm	Pearso n Correla tion	.087	.27 3*	.051	.267* *	1	.239* *	.091	.433**	.363**
	Sig. (1- tailed)	.244	.01 3	.342	.015		.027	.234	.000	.001
	N	66	66	66	66	66	66	66	66	66

		Motiv ation	Nec essi ties	Enga geme nt	Age ncy	Multi lingu alis m	Learni ng Englis h	Engli sh class	Profe ssion al benef it	Pers onal devel opme nt
	N	66	66	66	66	66	66	66	66	66
Learning English	Pearso n Correla tion	.307**	.38 7**	.256*	.373*	.239 *	1 *	.394* *	.412**	.373**
	Sig. (1- tailed)	.006	.00 1	.019	.001	.027		.001	.000	.001
	N	66	66	66	66	66	66	66	66	66
English class	Pearso n Correla tion	.766**	.42 1**	.497**	.579*	.091	.394**	1	.437**	.616**
	Sig. (1- tailed)	.000	.00 0	.000	.000	.234	.001		.000	.000
	N	66	66	66	66	66	66	66	66	66
Professiona l benefit	Pearso n Correla tion	.426**	.52 3**	.419**	.310*	.433 **	.412**	.437* *	1	.478**
	Sig. (1- tailed)	.000	.00 0	.000	.006	.000	.000	.000		.000
	N	66	66	66	66	66	66	66	66	66
Personal developme nt	Pearso n Correla tion	.504**	.45 1**	.428**	.475*	.363 **	.373**	.616* *	.478**	1
	Sig. (1- tailed)	.000	.00 0	.000	.000	.001	.001	.000	.000	
	N	66	66	66	66	66	66	66	66	66

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

## Appendix J

### Attitudes Questionnaire (Final) Non-parametric Analyses for Independent Samples

**Table J1**

*Stability of Answers. Kruskal-Wallis Test. Section 1 Multilingualism*

	Kruskal-Wallis H	df	Asymp. Sig.
AQS1Q1 Las personas que hablan más de un idioma tienen más amigos	.985	1	.321
AQS1Q2 Hablar más de un idioma es una habilidad valiosa	.106	1	.745
AQS1Q3 Hablar solo un idioma es inaceptable actualmente	.133	1	.715
AQS1Q4 Las personas que hablan más de un idioma tienen una visión más amplia del mundo	.088	1	.766
AQS1Q5 Si aprendes inglés es más que suficiente para tener éxito.	1.087	1	.297
AQS1Q6 Se necesita aprender inglés solo para vivir en otro país.	1.275	1	.259
AQS1Q7 Me gusta la idea de hablar español e inglés.	2.901	1	.089
AQS1Q8 Las personas que hablan español e inglés tienen ventajas sobre los demás.	2.421	1	.120
AQS1Q9 Admiro a las personas que hablan varios idiomas	.353	1	.552
AQS1Q10 Hablar solo la lengua materna es suficiente para mí	1.758	1	.185

a. Kruskal Wallis Test

b. Grouping Variable: Version

**Table J2***Stability of Answers. Kruskal-Wallis Test. Section 2 Learning English*

	Kruskal-Wallis H	df	Asymp. Sig.
AQS3Q1Me gusta el inglés.	3.910	1	.048
AQS3Q2El inglés es un idioma importante en la actualidad.	4.917	1	.027
AQS3Q3El inglés es un idioma importante en México.	1.793	1	.181
AQS3Q4El inglés es un idioma bonito.	.324	1	.569
AQS3Q5El inglés se oye bien.	.303	1	.582
AQS3Q6Me gusta escuchar el inglés en canciones, películas, videos e internet, etc.	2.192	1	.139
AQS3Q7Hay idiomas que son más útiles que el inglés.	.487	1	.485
AQS3Q8Hay otros idiomas que me gustan más que el inglés.	.029	1	.865

a. Kruskal Wallis Test

b. Grouping Variable: Version

**Table J3***Stability of Answers. Kruskal-Wallis Test. Section 3 English class*

	Kruskal-Wallis H	df	Asymp. Sig.
AQS4Q1Las clases de inglés siempre están entre mis favoritas.	4.233	1	.040
AQS4Q2Me gusta mucho aprender inglés.	2.710	1	.100
AQS4Q3Aprender inglés es divertido.	2.386	1	.122
AQS4Q4Ojalá hubiera empezado a aprender inglés a una edad temprana.	5.313	1	.021
AQS4Q5Vale la pena el tiempo usado para aprender inglés.	5.904	1	.015
AQS4Q6Las clases de inglés son más entretenidas que otras clases.	2.178	1	.140
AQS4Q7Lo que aprendo en las clases de inglés despierta mi interés.	1.454	1	.228
AQS4Q8Aprender inglés vale el esfuerzo que representa.	3.156	1	.076

a. Kruskal Wallis Test

b. Grouping Variable: Version

**Table J4***Stability of Answers. Kruskal-Wallis Test. Section 4 Professional benefit*

	Kruskal-Wallis H	df	Asymp. Sig.
AQS5Q1Es importante aprender inglés en mi carrera.	3.012	1	.083
AQS5Q2Es importante aprender más de un idioma en mi carrera.	1.203	1	.273
AQS5Q3Es importante aprender inglés para tener mejor preparación académica.	2.361	1	.124
AQS5Q4 Saber inglés ayuda a obtener un mejor trabajo.	.052	1	.820
AQS5Q5Saber inglés permite tener mejores oportunidades de desarrollo profesional (becas, movilidad, lecturas científicas).	5.094	1	.024
AQS5Q6Necesitaré usar inglés en mi trabajo (para mi desarrollo profesional).	1.444	1	.229
AQS5Q7Merece la pena aprender inglés incluso cuando crea que nunca lo usaré en mi profesión.	8.982	1	.003

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a. Kruskal Wallis Test

b. Grouping Variable: Version

**Table J5***Stability of Answers. Kruskal-Wallis Test. Section 5 Personal development*

	Kruskal-Wallis H	df	Asymp. Sig.
AQS6Q1 Las personas que hablan inglés tienen más oportunidades en la vida que las personas que no lo hacen.	1.825	1	.177
AQS6Q2 Aprender otro idioma puede ser una experiencia gratificante en sí misma.	.154	1	.694
AQS6Q3 Ser capaz de utilizar otro idioma es importante para mi futuro (profesional).	4.959	1	.026
AQS6Q4 Aprender otros idiomas es una pérdida de tiempo.	2.818	1	.093
AQS6Q5 Saber un idioma extranjero ayuda a las personas a sentirse mejor consigo mismas.	.971	1	.324
AQS6Q6 Merece la pena aprender un idioma extranjero incluso cuando crees que nunca lo vas a utilizar.	2.951	1	.086
AQS6Q7 Los mexicanos deben aprender idiomas extranjeros.	2.363	1	.124
AQS6Q8 Aprender idiomas es aburrido.	8.526	1	.004
AQS6Q9 Todo el mundo debería ser capaz de utilizar al menos una lengua extranjera.	.336	1	.562

a. Kruskal Wallis Test

b. Grouping Variable: Version

## Appendix K

### Attitudes Questionnaire (Final) Reliability

**Table K1**

*Internal consistency. Cronbach Alpha. Section 1 Multilingualism*

Cronbach's Alpha	Cronbach's Alpha Based		N of Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
	on Standardized Items							
.711	.713		9					
AQS1Q1	Las personas que hablan más de un idioma tienen más amigos	24.26	14.071	.576	.389	.644		
AQS1Q2	Hablar más de un idioma es una habilidad valiosa	23.67	15.856	.445	.390	.676		
AQS1Q3	Hablar solo un idioma es inaceptable actualmente	25.12	15.554	.357	.271	.693		
AQS1Q4	Las personas que hablan más de un idioma tienen una visión más amplia del mundo	23.91	16.330	.422	.320	.682		
AQS1Q5	Si aprendes inglés es más que suficiente para tener éxito.	24.32	15.297	.484	.441	.667		
AQS1Q6	Se necesita aprender inglés solo para vivir en otro país.	24.62	15.470	.332	.250	.700		
AQS1Q7	Me gusta la idea de hablar español e inglés.	23.74	17.302	.248	.347	.709		
AQS1Q8	Las personas que hablan español e inglés tienen ventajas sobre los demás.	24.20	16.622	.296	.211	.702		
AQS1Q9	Admiro a las personas que hablan varios idiomas	23.62	16.977	.329	.314	.696		



**Table K2***Internal consistency. Cronbach Alpha. Section 2 Learning English*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.620	.651	4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
AQS3Q3El inglés es un idioma importante en México.	10.26	2.748	.346	.145	.586
AQS3Q4El inglés es un idioma bonito.	10.06	2.550	.517	.320	.477
AQS3Q5El inglés se oye bien.	10.02	2.754	.465	.271	.520
AQS3Q6Me gusta escuchar el inglés en canciones, películas, videos e internet, etc.	10.21	2.108	.350	.128	.630

**Table K3***Internal consistency. Cronbach Alpha. Section 3 English Class*

Cronbach's Alpha					
Based on					
Cronbach's Alpha	Standardized Items	N of Items			
.818	.823	5			

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
AQS4Q2Me gusta mucho aprender inglés.	12.67	5.456	.686	.571	.759
AQS4Q3Aprender inglés es divertido.	12.73	5.524	.611	.431	.781
AQS4Q6Las clases de inglés son más entretenidas que otras clases.	12.73	6.232	.382	.179	.851
AQS4Q7Lo que aprendo en las clases de inglés despierta mi interés.	12.53	5.361	.738	.610	.743
AQS4Q8Aprender inglés vale el esfuerzo que representa.	12.26	5.794	.673	.513	.766

**Table K4***Internal consistency. Cronbach Alpha. Section 4 Professional Benefit*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.837	.840	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
AQS5Q1Es importante aprender inglés en mi carrera.	13.80	5.422	.731	.627	.782
AQS5Q2Es importante aprender más de un idioma en mi carrera.	13.94	5.381	.630	.541	.807
AQS5Q3Es importante aprender inglés para tener mejor preparación académica.	13.74	5.486	.651	.475	.801
AQS5Q4 Saber inglés ayuda a obtener un mejor trabajo.	13.85	5.331	.591	.418	.819
AQS5Q6Necesitaré usar inglés en mi trabajo (para mi desarrollo profesional).	14.06	5.381	.610	.388	.813

**Table K5***Internal consistency. Cronbach Alpha. Section 5 Personal Development*

Cronbach's Alpha	Cronbach's Alpha Based		N of Items			
	on Standardized Items			Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
.785	.798		6			
AQS6Q1 Las personas que hablan inglés tienen más oportunidades en la vida que las personas que no lo hacen.	16.33	7.149	.477	.447	.767	
AQS6Q2 Aprender otro idioma puede ser una experiencia gratificante en sí misma.	16.11	6.989	.639	.557	.730	
AQS6Q5 Saber un idioma extranjero ayuda a las personas a sentirse mejor consigo mismas.	16.59	7.230	.357	.215	.805	
AQS6Q6 Merece la pena aprender un idioma extranjero incluso cuando crees que nunca lo vas a utilizar.	16.11	7.019	.660	.504	.727	
AQS6Q7 Los mexicanos deben aprender idiomas extranjeros.	16.18	7.105	.519	.475	.756	
AQS6Q9 Todo el mundo debería ser capaz de utilizar al menos una lengua extranjera.	16.18	6.797	.635	.436	.728	

**Table K6***Reliability by Dimension*

Cronbach's Alpha		
Based on		
Cronbach's Alpha	Standardized Items	N of Items
.734	.757	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Multilingualism	73.13	76.12	.368	.279	.769
Learning English	83.65	92.72	.466	.240	.703
English class	87.01	85.80	.486	.468	.692
Professional benefit	85.39	80.64	.621	.389	.645
Personal development	81.77	75.96	.641	.489	.631

## Appendix L

### Attitudes Questionnaire (Final) Correlations

**Table L1**

*Attitudes Questionnaire Correlations by Dimension*

		Multilingualism	Learning English	English class	Professional benefit	Personal development
Multilingualism	Correlation Coefficient	1.000	.227*	.113	.410**	.342**
	Sig. (1-tailed)	.	.034	.182	.000	.002
	N	66	66	66	66	66
Learning English	Correlation Coefficient	.227*	1.000	.423**	.414**	.379**
	Sig. (1-tailed)	.034	.	.000	.000	.001
	N	66	66	66	66	66
English class	Correlation Coefficient	.113	.423**	1.000	.469**	.576**
	Sig. (1-tailed)	.182	.000	.	.000	.000
	N	66	66	66	66	66
Professional benefit	Correlation Coefficient	.410**	.414**	.469**	1.000	.572**
	Sig. (1-tailed)	.000	.000	.000	.	.000
	N	66	66	66	66	66
Personal development	Correlation Coefficient	.342**	.379**	.576**	.572**	1.000
	Sig. (1-tailed)	.002	.001	.000	.000	.
	N	66	66	66	66	66

**Table L2**

*Correlation Between Investment and Attitudes Questionnaires*

		Motivation	Necessities	Engagement	Agency	Multilingualism	Learning English	English class	Professional benefit	Personal development
Motivation	Correlation Coeff	1.000	.422**	.550**	.408*	.109	.278*	.704**	.442**	.436**
	Sig. (1-tailed)	.	.000	.000	.000	.192	.012	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Necessities	Correlation Coeff	.422**	1.000	.488**	.386*	.314**	.450*	.400**	.653**	.461**
	Sig. (1-tailed)	.000	.	.000	.001	.005	.000	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Engagement	Correlation Coeff	.550**	.488**	1.000	.339*	.135	.292*	.459**	.482**	.423**
	Sig. (1-tailed)	.000	.000	.	.003	.140	.009	.000	.000	.000
	N	66	66	66	66	66	66	66	66	66
Agency	Correlation Coeff	.408**	.386**	.339**	1.000	.331**	.340*	.474**	.356**	.418**
	Sig. (1-tailed)	.000	.001	.003	.	.003	.003	.000	.002	.000
	N	66	66	66	66	66	66	66	66	66
Multilingualism	Correlation Coeff	.109	.314**	.135	.331*	1.000	.227*	.113	.410**	.342**
	Sig. (1-tailed)	.192	.005	.140	.003	.	.034	.182	.000	.002
	N	66	66	66	66	66	66	66	66	66
Learning English	Correlation Coeff	.278*	.450**	.292**	.340*	.227*	1.000	.423**	.414**	.379**
	Sig. (1-tailed)	.012	.000	.009	.003	.034	.	.000	.000	.001
	N	66	66	66	66	66	66	66	66	66
English class	Correlation Coeff	.704**	.400**	.459**	.474*	.113	.423*	1.000	.469**	.576**
	Sig. (1-tailed)	.000	.000	.000	.000	.182	.000	.	.000	.000
	N	66	66	66	66	66	66	66	66	66

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		Motivation	Necessities	Engagement	Agency	Multilingualism	Learning English	English class	Professional benefit	Personal development
	N	66	66	66	66	66	66	66	66	66
Professional benefit	Correlation Coeff	.442**	.653**	.482**	.356*	.410**	.414*	.469**	1.000	.572**
	Sig. (1-tailed)	.000	.000	.000	.002	.000	.000	.000	.	.000
	N	66	66	66	66	66	66	66	66	66
Personal development	Correlation Coeff	.436**	.461**	.423**	.418*	.342**	.379*	.576**	.572**	1.000
	Sig. (1-tailed)	.000	.000	.000	.000	.002	.001	.000	.000	.
	N	66	66	66	66	66	66	66	66	66