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MASTER DEGREE IN LANGUAGE AND COMMUNICATION

**Elevating EFL Students Intercultural Awareness through Merging The
Use of Artificial Intelligence Chatbots with Multiple Intelligence Theory**

*Case Study: Master One and Two language and Communication at the University of
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Submitted by: **Berrouaine Kaouter Nour Elhouda**

Members of Jury:

Examiner: Dr.Oulad Si Bouzian Sabrina

University of Mostaganem

Chairman: Dr. Teguaia Cherif

University of Mostaganem

Supervisor: Dr. Hairech Faiza

University of Mostaganem

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Abstract

The study focuses on developing students' intercultural awareness by integrating artificial intelligence chatbots and human intelligence theory (MI). It aims to investigate how students manipulate their intelligence to improve their intercultural skills. Additionally, it also emphasizes the role of AI chatbots in the intercultural communication competence (ICC) learning process and the possible ways to use these tools effectively. The study adopts a mixed method approach; the research contains a triangulation encompassing; the student's questionnaire, the teacher interview, and classroom observation. After the data collection process, the study reveals that students have enhanced ICC knowledge but lack communicative experiences. They also can adapt their intelligence according to session requirements. Based on the findings, AI chatbots complement human intelligence in ICC learning, but they can never replace it. The research suggests a blended learning approach combining multiple intelligences theory and AI chatbots to enhance students' ICC, with a focus on emphasizing multiple intelligence theory in the classroom and using AI chatbots as assistants. The study's implications extend, not only, to the language learning educational system, but also concern domains such as psychology, sociology, cultural studies, and computer science. It could potentially inspire programmers to develop AI chatbots that closely simulate human language and consider intercultural communication competence.

Keywords:

ICC: Intercultural communicative Competence/ MI: Multiple intelligences Theory/AI: Artificial Intelligence

Dedication

I thank god for giving me the power to finish this work And reach this goal “ alhamdulillah”

- ❖ *I dedicate this dissertation to my parents, I thank them for motivating me and encouraging me through all these years, I'd feel incredibly lucky to have lovely parents like you, for my mom and my dad, I owe you a great debt that I hope that one day I will be able to pay, I also hope that I made you super proud of me*
- ❖ *To my lovely sister “ Dr. Imen Berrouaine”, thank you for your support and help. I'm so proud that I have a beautiful and intelligent sister like you, I promise you that I will continue making you proud. wish you all the success. Special thanks to my whole family especially my sister “Marwa” I love you, and I appreciate your love and support through my academic and educational journey, most importantly thank you for believing in me.*
- ❖ *To my dear supervisor “Madame Hairech” thank you so much for encouraging me to do the best that I can, and for also believing in my abilities and my ideas. I will be forever grateful to you for helping me in coming out with this iconic work*
- ❖ *For all my speaking spot family thank you for sharing these unforgettable moments that will be precious memories, you were the best team ever.*
- ❖ *To all Master's Two Language and Communication students I had an incredible experience with you during the last 2 years thank you for your positive energy and collaboration.*
- ❖ *Lastly, I would like to thank all teachers of language and communication, and thank you for your professionalism, we are so proud to have such knowledgeable teachers like you.*
- ❖ *At the end of this long dedication, I would like to mention our brothers and sisters in Gaza might Allah be with you. The victory is near and forever “**FREE PALESTINE**”*

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Before everything I would like to say that this work is the result of months of effort and hard work, we have chosen this particular topic for a purpose, it is very essential to clarify that the study encompasses completely new ideas which hopefully will be a great addition to the scientific research community, the study also aims to reshape the educational learning systems. We worked super hard to come up with practical not only theoretical research ideas.

The greatest thanks go to my supervisor, I would like to express my gratefulness, through this academic journey, you were the right guide and mentor, the most importantly I'm super thankful for putting your trust and believing in me, I'm so lucky for having such knowledgeable, supporting and reliable teacher like you . this work is accomplished due to your incredible guidance. I would like to express my deepest thanks for choosing me to be your supervisee and trusting my vision. I will forever I will be grateful to anyone who directly or indirectly contributed to this work, special thanks to “Prf. Dr. Sarnou Dalale and Prf. Dr.Sarnou Hanane”, thank you for your generosity and being helpful through all these years. Words will not be enough to thank you. I hope that I have you a good image of me.

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List of Abbreviations

ICC: Intercultural Communicative Competence

MI: Multiple intelligences Theory

AI: Artificial Intelligence

NLP: Natural language processing

SI: Social Intelligence

EI: Emotional Intelligence

TGG: Transformational Generative Grammar /UG: Universal Grammar

GPT: Generative Pre-trained Transformer

General Introduction

Throughout the years English gained a huge importance in various fields. As English became the number one language commonly used as lingua franca among various cultures, it has established a strong connection between language and culture. The incorporation of intercultural knowledge within the domain of language learning has become crucial, particularly for EFL students. Unfortunately, the cultural side has been somewhat neglected in the past, leading to the proliferation of stereotypes, cultural misunderstandings, and even racism. It is essential to address and analyze the hidden dimensions of language, as Hall suggested that cultures are like icebergs, with much of their depth concealed. By delving into the depths of language, we can truly achieve native-like proficiency. He added that regardless of the societal culture, a person gains knowledge of surface culture consciously and purposely. (Hall, 1976)

ICC is a highly required element in any language learning process regardless of the importance of mastering the four skills (listening, reading, writing, and speaking) intercultural Communicative competence is considered the most significant part that has enough capacity to construct a deeper understanding of various angles of language and culture. Therefore elevating students' intercultural awareness became the number one priority in the language learning system . as many countries are working on developing the school's curricula shaping new perceptions about cultural differences. According to Guilherme(2000), Effective communication might be insufficient unless it is associated with a comprehensive understanding of various cultural dimensions, aimed at cultural diversity acceptance.

Various studies have proven that our brain is not only capable of receiving a limited amount of information but also possesses a highly detailed analytical system that enables us to learn. This immense capacity can be accessed through the use of psychological principles, such as multiple intelligences. Furthermore, over the years, the domain of language learning has witnessed significant changes due to the dominance of technology, which can be seen as a double-edged sword. Recently, an interesting debate has emerged regarding whether AI chatbots could conquer and replace the role of teachers.

Objectively speaking, AI chatbots are an advanced invention that can perform a limited range of tasks. However, a robot can never replace natural human intelligence. Language learning requires a high level of intelligence such as; SI, and EI. It is a journey where learners are taught how to think, act, and react in the target language. This process provides learners with the opportunity to acquire and understand the culture and its unique features. In summary, this research aims to conduct a detailed examination of AI chatbots and MI (multiple intelligences theory) to explore the possibility of integrating them into one method to enhance students' intercultural awareness. To delve deeper into the topic, a case study research design is suggested, incorporating a mix of qualitative and quantitative methodologies for both data collection and analysis.

Research Questions:

- How can the combination of Multiple Intelligence (MI) and chatbots (AI) be leveraged to enhance students' intercultural competence?
- How will variations in intercultural skills and intelligence among students be taken into consideration in the design of AI Chatbot-assisted activities?

Hypotheses :

- Human intelligence and AI chatbot power can be effectively combined using a new blended method. This new method will be divided into two elements; the MI will be the element that is highly used in class, during the lecture development teachers are required to train their learners how to manipulate their personal and interpersonal intelligence to become intercultural communicators, by designing activities such as dialogues, conversational or putting them in a particular social situation and see how they going to react. While the AI will investigate more at home. with AI students will be able to practice the target language and design their tasks, human-like conversations, virtual video calls, and quizzes that fit their intercultural abilities.

- AI chatbots could be designed to meet the student's different intelligences. It may have the ability to adjust its system To give the desirable response. Predictably, in the near future, AI might develop its algorithm, making itself smart enough to recognize different intelligence profiles using NLP techniques.

This study aims to examine the possibility of integrating AI Chatbots and MI (Artificial Intelligence and Multiple Intelligences) into the learning process to foster cultural awareness. The research seeks to explore the effectiveness of this combination in enhancing EFL students' perception of cultural diversity and encouraging openness towards different communities. It emphasizes the equal importance of culture and language in this context. The research plans to design a new blended learning method in which human MI will be more invested in the classroom besides AI assistance. This study also takes into account the student's abilities variation in AI use. It also works on developing AI chatbot algorithms, allowing them to be smart enough to analyze the user's intelligence and intercultural skills based on their human text or questions. Through working on the natural language processing of these AI programs in order to provide the users with a suitable response.

The research encompasses three chapters, The first chapter covers the theoretical background of intercultural awareness, how it is developed, how it impacts language learning, and the way advanced technologies particularly AI chatbots are integrated with multiple intelligences theory MI to serve this aim. The second chapter, is devoted to the research design and the selection of data-collecting instruments and the technique used were the main topics of discussion. This section describes the procedures required for analyzing the data and specifies the exact techniques used to collect the data. Moreover, the final chapter delves into the analysis of data and discussion of the final results. This chapter also addresses the suggestions and implications to be integrated into the learning process.

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1 Chapter one

1.1 Introduction

This chapter delves into significant aspects of intercultural awareness and its connection to language learning, the implementation of multiple intelligence theory, and AI technology, particularly artificial intelligence chatbots. The chapter commences with an introduction to the historical background of culture and its impact on the language learning field. The chapter also addresses the motivations behind teaching culture and the various techniques employed in this process. The diverse angles of intercultural communicative competence (ICC) in language teaching are highlighted as well. Moreover, the chapter explores the deep connection between ICC and multiple intelligences, focusing on their unique combination. Moreover, it focuses on the positive role of artificial intelligence, precisely in engaging students, at the same time the chapter sheds light on the negative effects AI may have on students' intercultural awareness. Especially, it tends to study how AI can foster stereotypes and create misunderstandings about other cultures if it is incorrectly used.

1.2 Introduction to Culture

Over history, culture has gained remarkable significance in societies, considering it as an integral part of every nation. However, throughout the years, culture has taken various forms and shapes, particularly in the domain of anthropology, philosophy, and linguistics, in which it strongly deals with language.

1.2.1 Historical Background of Culture

The term "culture" has deep bounds in human history. Over centuries, the conception of culture has stolen the attention of many scientists. Until the last centuries, the significance of culture has been intricately associated with Kant's teleological understanding of humanity's moral development. Kant (1790) perceives culture as the development of humanity's specific nature; the driving force behind this is "human asocial sociality" (Roth & Surprenant, 2012). This development gives rise to cultural

institutions. Kant's perspective sheds light on culture's transformative potential. He also acknowledges the noticeable existence of inequality and domination within cultural systems, viewing them as unavoidable consequences of the process of cultural evolution (Marwah, 2012).

The anthropological conception of culture was introduced by figures like Edward Tylor in the 19th century and became widespread after Kant's time. The anthropological view on culture obtained significant popularity, due to the contribution of Franz Boas and others in the late 19th and early 20th centuries. In 1952, American anthropologists Kroeber and Kluckhohn (1952) conducted a critical review, identifying 164 different definitions of culture. Despite numerous attempts to define culture adequately, there was no consensus among anthropologists regarding its nature in the early 20th century, as noted by (Apte, 1994). This lack of agreement highlights the complexity and multidimensional nature of the concept of culture, reflecting the challenges in encapsulating it within a single, universally accepted definition.

The Definitions of Culture

According to Tyle (1870) 'Culture' is an intricate and multifaceted tapestry which contains art traditions, values, beliefs, and morals" (Spencer-Oatey, 2008). In his view culture is a complex system that deals with different aspects and dimensions, making it diverse and varied. He adds that culture is a woven fabric made up of different networks or elements that shape the importance and impact of culture among individuals. Spencer-Oatley views Culture as a mysterious set of basic assumptions and values, life paths, beliefs, rules, and behavioral conventions shared by a group of people. These factors affect but do not decide each member's behavior and their analysis of the "meaning" of others' behavior (Spencer-Oatey, 2008).

Kroeber and Kluckhohn (1952) assert that Culture encompasses both visible and invisible patterns of behavior that are gained acquired and sent by schemes. The core of culture includes historically derived, ancestral, and communicative thoughts, alongside their connected values. Cultural systems can be seen as both products of past actions and as conditional elements influencing future actions. On the

other hand, Schwartz- (1992) determines that Culture encompasses the experiences, organized, acquired, or created by individuals within a population. This includes images or encasement and their analysis (meanings) transmitted from past generations, contemporaries, or constructed by the individuals themselves (Spencer-Oatey, 2008).

1.2.2 Features of Culture

Culture is socially inherited and has no existence in isolation; it is a social phenomenon that develops through interactions and communication with others. It is shared among members of society and cannot be obtained individually. Moreover, culture is transmissive, it is a legacy inherited through generations. Parents play a significant role in transmitting cultural habits to their kids, primarily through language rather than genetics. even though culture has consistency elements, it is dynamic and adaptive, things slow but constantly change, reflecting growth and development (Van Hek, Kraaykamp, 2015)

Considered a powerful social construct, culture is not related to an innate ability of human existence; instead, it is constructed by people within a society. It covers various elements, including values, beliefs, customs, language, norms, and artifacts, culture is created and shared by a group of individuals. This perspective is reinforced by Boyacigiller, et al. (2004). According to the authors, language itself is a product of social interaction- acts as the bridge that carries the weight of culture. It is the shown image through which values, beliefs, and customs are represented. Through language, we share stories, emotions, knowledge, and ideas shaping our own cultural preceptive.

Additionally, various aspects of culture lead members of different societies to perceive, interpret, and analyze things differently, thereby influencing human culture (Adler, 2003). This constant flux, driven by diverse perspectives and experiences, allows cultures to develop and flourish, shaping how we visualize, interpret, and analyze things. The dynamic, shared, and socially constructed nature of culture proves its impact on the way individuals and societies interact with the world.

1.2.3 The Relationship between Culture and Language

The co-relationship between language and culture is very complex and ancient. Approximately twenty thousand years ago, humans began adopting specific ways of living, now referred to as 'culture'. In this evolutionary process, language played a significant role in presenting culture more clearly, facilitating the exchange of cultural knowledge among people. For years, linguists struggled to establish themselves as independent and interrelated domains of science, defining and explaining language as a system. This has shaped the concrete concept of language, presenting it through lived experiences.

Language is a guide to social reality ... it powerfully conditions all our thinking about social problems and processes... The 'real world' is to a large extent unconsciously built up on the language habits of the group"(Kramersch, no date).

1.2.4 Intercultural Awareness and Language

An idea about communicative language teaching has been developed that, even if contextualized and linguistically Adapted, communication may not be sufficient unless it is linked by multidimensional, cultural awareness supposed to lead to the achievement of cultural acceptance (Guilherme, 2000). Various studies prove that communicative competence is achieved only if we define a path toward the other culture. Akalin (2004) focuses on graduation in language learning through which students are gradually introduced to other cultures. Based on her findings, she suggests that textbooks for especially young learners should first be stands on elements from Turkish and even local culture and move slowly to the target culture so that students would not feel inhibited as we go from simple/known to more complex/unknown in any educational process (Çetinavcı, 2012). Educators must demonstrate cultural relevance, Ersin (2009) examines the cultural behavior of Turkish teachers of the English language during their instruction and their classroom applications. The researcher reveals that the teachers appear not to be integrating culture-related classroom practices in their classes. Atay, Kurt and Eresin(2009). Scholars equally emphasize that teacher education programs should include a cultural aspect in their curricula, such as a course on intercultural communication, to equip prospective teachers with intercultural awareness and intercultural competence (Çetinavcı, 2012). However, the introduction of

new approaches or methods causes many challenges. The recent emphasis on the 'cultural turn' in foreign language education, terms like 'culture' and 'intercultural competence,' reflect the theoretical impact on curriculum design (Byram, et al., 2013)

1.2.5 Cultural Diversity and Educational Systems:

The concept of cultural diversity has proved itself within educational communities, with numerous schools and institutes incorporating the teaching of multiculturalism and the acceptance of various cultures. However, despite the emphasis on these principles, it often appears superficial.

In all of the countries whose education systems have adopted at least nominally “multicultural” or “intercultural” strategies, propositional and programmatic texts strongly predominate over empirical analyses and specific case studies on the real impact that the proposed transformation (Krüger-Potratz, 2005, p274).

In the language learning field, culture gains the highest importance, and theories and methods are established to teach intercultural competence and cultural acceptance. The cultural acquisition should be a desirable goal of language learning as long as learners are capable of thinking and seeing from a native perspective, the goal of language acquisition is accomplished. Therefore this vision is only achieved by mastering “cultural intelligence”, which is the ability to recognize, appreciate, and grow cultural acceptance of other cultures (*“Big C” Culture, “Little C” Culture*, 2017).

1.2.6 Hall’s Models (Big c and Little c)

Hall (1976) introduces a full detailed study of culture, he divides it into big culture refers to the shown side such as; Art, traditions, literature, and architecture, and small culture which represents the invisible part of a culture that holds; beliefs values norms verbal and nonverbal language. According to Hart (1999), the work of the anthropologist Edward T. Hall can be considered of major influence in the field of intercultural research. When one is first presented with a new culture, one is usually first interacting only with the top 10%—literally, the tip of the iceberg! Sometimes, people make assumptions

or develop ideas about another cultural community without really exploring the depth of culture the 90% that makes up the majority of that culture’s values and beliefs.

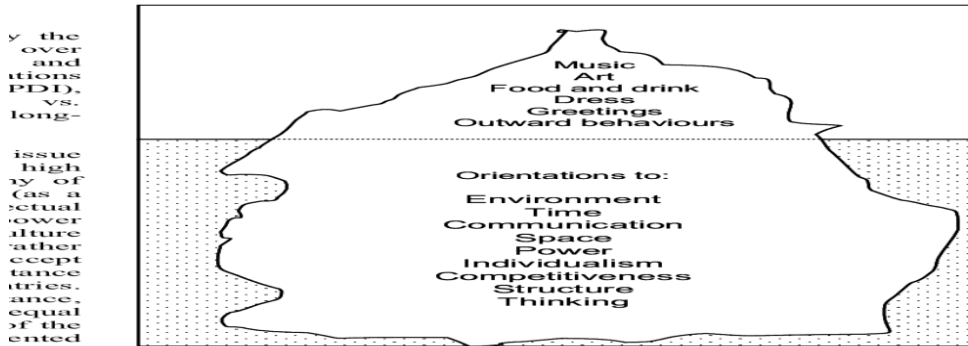


Figure 1. The Cultural Iceberg (Hall,1976)

High-Low Context

Hall (1976) presumes that cultures are associated with their communication styles by referring to the degree of non-verbal context used in communication. Hall (2000: 37) asserted that ‘the level of context clarifies everything about the nature of the communication. He mentioned earlier that ‘our mental program connects information in a context to generate what humans refer to as meaning’ (Hall, 1973)

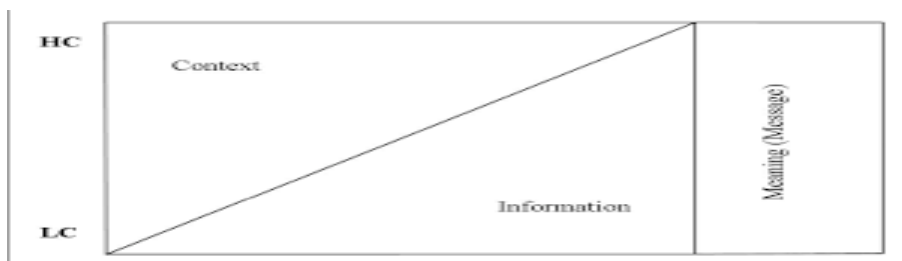


Figure 2. High- and low-context Source Hall (1976).

1.3 Multiple Intelligence Theory

1.3.1 The Conception of Intelligence

The human brain has an impressive ability to interpret, think, and remember a huge number of memories, scenarios, and information. It is often considered the source of human power and the main

organ in the human body. Therefore, Intelligence is a unique characteristic that defines the human brain, so what is intelligence?

Wechsler (1903) refers **intelligence** to as the global capacity of the human being that enables him to act and think purposefully and to deal effectively with the environment. It is considered global due to its definition of the individual's behavior as a whole. Intelligence is evaluated through the measurement of these abilities, providing an evaluation of the individual's cognitive skills. Bearing in mind, that intelligence goes beyond this simple collection of these abilities; it is a comprehensive and inclusive quality that extends beyond mere aggregation.

Sternberg (1986) states that integrating the components of analytical, creative, and practical intelligence can offer a blueprint for “successful intelligence.” In his view, intelligence is divided into explicit intelligence (also known as analytical intelligence) which is associated with the ability to interpret, analyze, and solve problems using logical and deductive reasoning. It encompasses traditional academic tasks that are tested by IQ tests. On the other hand, implicit intelligence refers to practical or contextual intelligence. It focuses on the ability to cope and build real-world environments effectively such as practical problem-solving, adapting to novel situations, and applying one’s skills in a contextually meaningful way.

In addition, intelligence relates to general mental capacities to solve problems and obtain new knowledge. Due to its broad nature, it incorporates cognitive functions such as perception, attention, memory, language, or planning. Moreover, intelligence can be measured by detailed tests with obtained scores predicting several broad social outcomes such as educational achievement, job performance, health, and longevity (Colom et al., 2010). According to Hebb (1944), Intelligence A is the natural capacity for cognitive growth. He explains intelligence as "intelligence B," which is a broad or average degree of development of the ability to observe, acquire knowledge, solve problems, think, and adapt.

1.3.2 Multiple Intelligence Theory

Multiple intelligences theory (Henceforth, MIT) has a significant impact on scientists and researchers. Gardner (1983) describes intelligence as “an ability to solve a problem or fashion, a product that is valued in one or more cultural settings”. He believes that intelligence can be flexible and that it can be learned as a set of abilities and skills to apply to any situation at any given time within any given context. He adds that we cannot gain certain mental powers unless we master all types of intelligence. Gardner affirms that human intelligence may take various forms. He finds that the traditional intelligence tests are competent enough to measure all dimensions of intelligence. Gardner introduced more than the eight branches of intelligence, i.e., you can be intelligent in terms of (1) linguistic (words); (2) logical-mathematical (numbers); (3) spatial (pictures); (4) musical (musical/rhythmic); (5) bodily-kinaesthetic (movement); (6) intrapersonal (self); (7) interpersonal (people); (8) naturalist (plants and animals).

According to Gardner (1983; 1993), Armstrong (1994), and Teele Gouws (2007)

- Each person possesses a unique mix of powerful intelligences, The development of intelligence not only varies between individuals, but also changes within each person over time
- Intelligences extend beyond traditional academic measures.
- Recognizing and fostering all intelligences is essential for individual development.
- Intelligences are not limited by age or circumstance.
- The development of each intelligence is considered vital.
- There is interrelated relationship between all types. The use of one intelligence can contribute in development of other intelligence.
- The real intelligence is barely noticed.
- The understanding and promotion of diverse intelligences are crucial aspects of human growth.

Table 1 Gardner's Principles of Multiple Intelligences Theory (Yavich, Rotnitsky, 2020).

1.3.3 Dimensions of Intelligence

Gardner classifies intelligence into several types, based on an individual's interests and nature. As human beings, we vary in our ways of thinking, analyzing, understanding things, and receiving information. That is what divided intelligence into various dimensions.

1.3.3.1 Linguistic Intelligence

Linguistic intelligence is the ability to use acquired knowledge from the past about a language's lexicon, syntax, semantics, and pragmatic conventions to cope with new tasks quickly. (SCHLESINGER,1971). Chomsky made revolutionary changes in linguistics through Transformational Generative Grammar (TGG), focusing on the mental capacity to generate sentences using unconscious knowledge called Universal Grammar (UG). Chomsky argues that the human brain is biologically programmed for language learning, asserting that the language faculty is innate, and the mind is active in the process of language acquisition(Barman, 2014).

1.3.3.2 Logical Intelligence

The proficiency in using numerical concepts and mathematical operations deals with logical reasoning, is shown in individuals such as mathematicians, accountants, statisticians, scientists, and computer programmers (Sharma& Ramesh, 2021).

1.3.3.3 Spatial Intelligence “Picture Smart”

Spatial intelligence refers to the capacity to represent internally the external world in one's mind and the ability to recreate visual experiences without physical stimuli. accurately interpret and observe the visual world and perform transformations on perceptions (Hayder H, no date)

1.3.3.4 kinaesthetic Intelligence

kinaesthetic intelligence is also related to the ability to express with the body engagement, balanced consistency between the body parts, and using physical ability and activities in problem-solving. It also deals with the intelligence of athletes, actors, dancers, ballerinas, and surgeons, designed for people who

have a huge into the fitnesses and sport; movements are important. People with advanced kinesthetic intelligence have very good eye-hand coordination, and great flexibility to transform their emotions into movement and talent. Bodily intelligence refers not only to the kinesthetic sense but also to the internal sense. The information we receive from the inner environment (Florin, 2020).

1.3.3.5 Intrapersonal Intelligence or Emotional Intelligence

Emotional Intelligence deals with understanding, analyzing, and delving deeply into us, knowing our strengths and limitations, and acting on this self-knowledge. It manifests in individuals who demonstrate self-discipline and personal authenticity (Sharma, Ramesh, 2021). In other words, it is the ability to comprehend and control our emotions intelligently. Emotional intelligence is born in the person. The first emotional attachment of the child is when the mother gives his/her needs such as; love, care, and food. The way the child interacts with others in his or her intimate environments, such as parents, siblings, friends, and teachers, may impact his or her emotional intelligence. Four key components make up emotional intelligence. First, is self-awareness. Organizational psychologist Tasha Eurich asserts that while 95% of individuals believe they are self-aware, only 10% to 15% genuinely are. This discrepancy may cause issues between individuals. According to Eurich's research, working with co-workers who lack self-awareness can reduce a team's success by half raise stress, and demotivate members. Moreover, Self-management is the capacity to control your emotions, especially under pressure, and have a good attitude in the face of obstacles. Self-managing leaders are more likely to react and struggle to control their impulses. In addition, leaders who possess exceptional social awareness demonstrate empathy. They make an effort to comprehend the thoughts and feelings of their co-workers, which helps them communicate and work together more effectively(Landry, 2019). Moreover, relationship management is a significant component, which refers to the action taken according to social awareness. These include skills for changing other people's behavior, which may include persuasion skills. According to the ESCI, these skills help us positively impact others and include; coaching and mentoring, managing conflict, leading or guiding groups, and collaborating with a team type of intelligence is very crucial for effective communication mainly for EFL students(Chefalo,2023)

1.3.3.6 Interpersonal Intelligence or Social Intelligence

Social intelligence covers our abilities to analyze other's actions and reactions in terms of (thoughts, intentions, desires, and beliefs), It involves adept interaction within complex social groups and close relationships, as well as a deep analysis of others' mindsets, along with an insight into their feelings, thoughts, and behaviors (Baron-Cohen et al., 2002). Many scholars highlight Baumeister and Leary's (1995) '**need to belong**' rule, which says that 'human beings have an innate desire drive to form and maintain at least a minimum quantity of lasting, positive, and form interpersonal relationships.' For instance, when students achieve their need to belong to a group of peers, motivation may increase, maladaptive behaviors such as anxiety, avoiding classes, and disconnecting from school might be decreased, and students' self-esteem and self-efficacy can be given a real boost (Bandura, 1997; Schunk, 1991; Zimmerman et al., 1992). Social intelligence is a capacity that requires mastering significant elements such as; "verbal and non-verbal communication".

➤ Verbal communication or NVC is known as an expression of our opinions, knowledge, and ideas through sound. Speaking often involves communicating with someone in person. Using nonverbal cues including eye contact, facial expressions, posture, gestures, and distance between two people to convey messages or signals refers to nonverbal communication. It makes use of visual signals including touch (haptics), speech (paralanguage), proximity (proxemics), body language (kinesics), and physical environments/appearance.

1.3.3.7 Musical Intelligence

Musical intelligence is the standard term used to characterize musical proficiency. The belief that people with musical abilities are born with this talent is a widely held one. While it's true that a small percentage of people achieve great success in music, most people show some degree of talent. Although the continuum of musical competence is evident, quantifying musical talent has proven to be difficult (Krishnan et al., 2014).

1.3.3.8 Naturalistic Intelligence

Naturalistic intelligence is the recent addition to Gardner's theory of intelligence. Gardner defines naturalistic intelligence as the capacity to identify, organize, and control environmental, object, animal, or plant aspects. Being aware of being by one's natural surroundings is what makes one intelligent. It exists in civil engineering, landscape design, gardening, cuisine, and the taxonomy of plants and animals. Naturalistic intelligence is not fixed, like conventional IQ is, like other intelligence or abilities. It can change and expand during the course of a person's life (Sadiku et al., 2020)

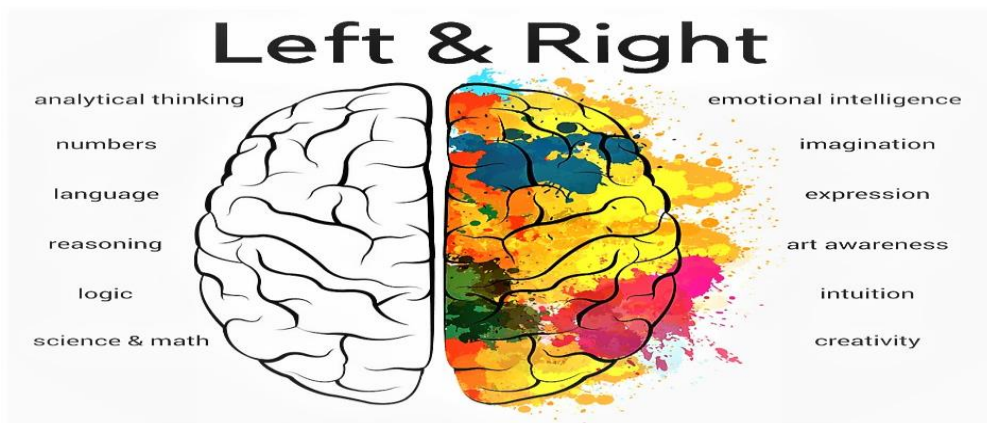


Figure 3: Different types of human intelligence Gardner(1999)

1.3.4 Applying Multiple Intelligences Theory in Classroom Instruction

While the multiple intelligence theory is a captivating psychological study, it is crucial to explore the way it can be used to effectively serve our learning aim in any classroom. According to Gardner, multiple intelligences theory is biologically and culturally based. Adopting Gardner's Theory of Multiple Intelligences can lead to many side effects for teachers in terms of classroom instruction

The theory claims that all seven intelligences are required to productively function in society. The educator must form an "intelligence profile" for each student. Since all human beings especially kids cannot learn in the same way. Knowing how each student learns will allow the teacher to properly enhance their progress(Ahvan&Pour, 2016). Gardner argues that individual intelligence does not affect

skill development, but a combination of several intelligences together affects learners' abilities and, in particular, their ability to deal with challenges and problem-solving “The reason why educators may face challenges in applying or dealing with all intelligences. For example, logical intelligence communicates academic capabilities and others. Accordingly, the different types of intelligence can be applied to teaching processes, where teaching is based on student skills and aims to advance students' abilities (Yang, 2013).

In the context of EFL, Tahrir and Yamini (2010) conducts a quasi-experimental study, through which they examine a group of 10 intermediate students' Female students. Participants' MI profiles and level of English proficiency are initially tested in the study. Participants receive MI-poor instructions During the control phase and MI-inspired instructions during the Experimental phase. The results reveal remarkably results better performance after the experimental phase, which demonstrates at least partial efficacy for MI-inspired use directions (Dolati& Tahriri, 2017)

A study by Kornhaber, Fierros, and Veenema (2004), examines the impact of Multiple Intelligences (MI)-based methods in multiple educational dimensions. The research, which includes interview and questionnaire data from educators, shed light on perceptions of the impact of MI-inspired practices. Out of 41 schools implementing MI-based curricular practices for at least three years, four-fifths report improvements in test scores. Additionally, these methods show impressive development in student behavior (54% of schools), parent participation (60% of schools), and the performance of students with learning disabilities (78% of schools). (Davis, 2011)

1.3.5 The Co-relationship between Multiple Intelligence Theory and Intercultural Awareness:

There is an interrelated relationship between the multiple intelligence theory and cultural awareness, playing equally crucial roles in language learning. Particularly, educators benefit from understanding both to design effective and engaging curricula. Having a deep understanding of other cultures is just as

important as recognizing and using the diverse intelligences and capacities of learners. The concept of intelligence itself seems to have different views according to each society.

A study in Finland has shown that males tend to be more intelligent regarding cognitive skills even though females are superior in social skills, boys are still considered smart even though intelligent girls are not expected to master mathematics as well as boys. From the Taiwanese prospection, in order to obtain a certain level of intelligence, there is a need to adapt and apply different abilities in different situations. Flexibility allows the person to manage difficulties from various angles in short, intelligence is defined as the ability to know what and when to use each skill(Furnham, 2000).

In the EFL field, fostering cultural awareness in students commences with understanding how their brains function. From this foundation, teachers can then build competencies and skills related to each student's unique intelligence profile, focusing specifically on interpersonal and personal intelligence. By nurturing these intelligences, teachers empower students to develop cultural sensitivity and acceptance towards diverse cultures. It is defined by Bhawuk and Brislin (1992) as the proficiency to accept cultural diversity and adapt one's behavior based on the cultural context, intercultural sensitivity encompasses four key factors: open-mindedness (accepting differences in viewpoints, customs, and beliefs), flexibility (adapting behavior to unfamiliar situations), individualism (emphasizing self-reliance and independence), and collectivism (emphasizing social connections and interdependence). This combination of open-mindedness, flexibility, and an understanding of individualistic and collectivistic values allows individuals to interact effectively and respectfully with people from diverse cultural backgrounds (Gülten, 2017).

1.4 Influence of Chatbots in Teaching Cultural Awareness

Throughout the last decades, the world has witnessed various changes, especially in technological domains. The new technological inventions, including AI chatbots, hold significant importance not only for more information access but also in various fields. Its algorithm enables the users to reach multiple responses and acquire new knowledge.

1.4.1 Introduction to Artificial Intelligence

The rapid development of technology has brought completely a new concept of intelligence known as artificial intelligence (AI). AI has become a worldwide phenomenon and has made significant changes in various aspects of our lives, particularly in the educational field. With AI, educational institutions can leverage advanced algorithms and machine learning techniques to enhance teaching methods, personalize learning experiences, and analyze vast amounts of data to gain valuable insights. This transformative technology has the potential to revolutionize education and empower learners in ways we couldn't have imagined before.

Artificial Intelligence (AI), a term founded by emeritus Stanford Professor John McCarthy in 1955, was first as “the science and engineering of making intelligent machines”. Many scientists invented humanized machines that can cleverly imitate human beings' tasks, but, today, we concentrate on machines that can learn and acquire just like humans. Since our human brain is programmed to think in a particular way to access particular information precisely. The mechanism of the brain is incomparable which enables humans to develop their thinking and knowledge in a very natural and creative way. Therefore, enabling machines to think like humans is a very complex and hard process. if we want to give machines human capacities we first have to invent the brain which seems at least nowadays impossible(). However, the mystery of understanding whether artificial intelligence is truly able to think began much before that. In Vannevar Bush’s seminal work *As We May Think* he suggested a system designed to enhance people’s knowledge and understanding (Smith, 2006).

The computers have an impressive ability to think logically. However, the idea of replacing or comparing machines with humans seems not possible for many people. There are a lot of concerns raised about the accurate definition of “ think “is important since there has been some strong opposition as to whether or not this idea could be even accepted. It is true that brains are small and may seem slow, yet they tend to be superior at specific tasks. Constructing intelligent systems would be beneficial, and creating and selling innovative products is also appealing. Historically, this perspective has proven to

be more successful. AI has the ability to enter into our lives over decades, often without being conscious. However, brains are much more complex than we think.

Based on the Cambridge Handbook of Artificial Intelligence, it is clear that one of the very first points to highlight is the fact that AI is a cross-disciplinary approach to the creation of various types of intelligence. Hence, AI is a high. Developed technology that covers various aspects of knowledge, from engineering to neurosciences. In each discipline where AI is involved, applications are obtained that are integrated into everyday human lives, shaping the way people interact with their external environment including other people, as well. Since it emphasizes intelligence, according to this definition, it belongs to the vast area of cognitive science creating and constructing independent domains of its own in this same field (Berti and Pinnaivalia, 2019). AI involves the development of machines and algorithms that can simulate or replicate certain cognitive functions, such as learning from data, recognizing patterns, and making decisions. The idea that AI is creating and constructing an independent domain within cognitive science implies that it is contributing unique theories, methodologies, and approaches specific to its domain.

1.4.2 Conception of Chatbots

The chatbot is the most accessible AI tool that caters to an illimited number of people, through its intricate systems and algorithms, allowing users to perform tasks and access information. This highly advanced technology aims to offer human-like responses and behavior, making users more comfortable and improving trust. According to Benton and Radziwill (2017), "A chatbot is an online system designed to create an impression of a human-human interaction with robots." While users may perceive interaction with a human, they are in fact, communicating with computer software that encompasses algorithms and predefined rules. Chatbots typically accept natural language input, enabling users to communicate in a manner that feels more intuitive and conversational."

Scharl (2004) explains that a chatbot is software that facilitates textual communication for users through natural language. It is crucial for users to experience interactions that simulate real humans,

underscoring the significance of a comprehensive knowledge base—the established set of rules guiding the chatbot's behavior (Scharl, 2004).

Chatbots can simulate natural language and human interaction, but their system goes beyond this capability. They function as applications in various fields including education, information search, commerce, and business. They have gained popularity on a global level due to the many benefits that they offer, making them a worldwide phenomenon

1.4.3 Integration of Chatbots in Educational System

In recent decades, the educational field has witnessed a radical change, impacting the learning system, processes, and outcomes. The high advancement of new intelligent technologies has revolutionized the roles played by schools, teachers, and learners. Artificial intelligence (AI) is implemented to reshape our perception of interaction and students' behavior in the educational environment. Predictably, teachers and learners will incorporate AI machines to exchange and share educational experiences, facilitating the achievement of their learning goals. These machines will provide interactive educational platforms that enhance personalized learning through conversations and responsive answers to questions. This approach is expected to overcome traditional classroom challenges, taking into account learners' motivation, and individual differences, and providing support for those with special needs. Through feedback mechanisms, there will be an increase in student achievement, empowering the relationship between teaching and learning. Consequently, solutions to the issues of interaction in large classrooms are proposed. In the educational field, Chatbots have multidimensional functions, they enhance student's classroom interaction skills, and also assist teaching faculty by automating tasks (Dsouza et al., 2019).

Artificial chatbots are not only designed to provide students with advanced technology but also to assist educators by offering them flexibility and techniques throughout the curriculum progression. chatbots act as valuable assistants and work on various angles of curriculum delivery. They can perform many tasks, such as grading or answering frequently asked questions, generating well-detailed exercises,

and giving educators a chance to focus on more intricate aspects of teaching. The use of Chatbots in education increases connectivity, and efficiency, and reduces uncertainty in interactions (Ondas et al., 2019)

Chatbots play a significant role in decreasing students' fears, stress, and uncertainty associated with interaction both inside and outside the instructional environment. With this advanced technology, students can attain higher academic performance more easily. Various applications enable students to fix their knowledge gaps, access information, and practice language skills without feeling embarrassed in a classroom setting. This increases connectivity and fosters a more confident, social, and active participation from students during class.

On the other hand, some studies have reported the limitations of using chatbots; for example, Fryer et al. (2017) conduct a study in a language course to compare the performances of the students using chatbots for practice and those who practiced via peer interactions; they notice that after 3 weeks, students' interest in using chatbots for practice decreased, while their interest in interacting with peers remained the same. It can be seen from these studies that using chatbots in educational settings has great potential; however, the limitations of the approach also need to be considered.

According to Rapp et al. (2021) evaluating the process of chatbots just on the grounds of their effectiveness, benefit, and ability to satisfy users is inadequate. The evaluation process of a chatbot should not be limited to just measuring how well it performs, the advantages it brings, or how well it meets user satisfaction. Rapp and colleagues suggest that some likely other essential factors or dimensions need to be taken into consideration while evaluating the impact of a chatbot. These crucial factors could involve aspects such as ethical considerations, user experience, adaptability, or the chatbot's ability to handle diverse situations. Paschoal et al. (2018) have a similar point of view and interpretation, asserting that most of the evaluations that have been done to test the effectiveness of Chatbot systems tackled in a small and minor sampling population. Researchers argue that many assessments of Chatbot performance were carried out on a small and unrepresentative group of

individuals, which may affect the reliability of the findings. This determines the significance of taking into account both the size and representativeness of the sample population when examining the effectiveness of Chatbot systems.

1.4.4 The Impact of a Chatbot on Language Learning

Teaching English as a foreign language with a focus on developing communicative competence. This includes language components, vocabulary, and other language tools as well as abilities like listening, speaking, reading, and writing. Traditional and digital communication techniques are considered a necessary element, as well as AI applications, such as simulation and communication activities. These tools simulate real-life communication and provide practical experience in language skills and educational games. Technology tools for communication enable the use of artificial intelligence for pronunciation, visual interpretation, and daily practice of situational communication. They also offer practice activities for the development of language skills and also give feedback to help the learners to achieve proficiency levels. The overall aim is to promote language acquisition as an interactive activity where focus is placed on the communicative use of the language. The information from Barnes-Hawkins (2016) leads to another source (Kushmar et al., 2021).

Various reviews are centered on the increasing use of Chatbot systems in the educational context, particularly in learning and teaching. According to Akcora et al. (2018), Chen et al. (2020), Lin & Tsai (2019), and Okonkwo & Ade-Ibijola (2020) state that Chatbots are designed to support course content through online platforms, with the capacity to function as a conversational assistant with the capability of providing as a huge amount information as possible in a specific area. Teachers are conscious of the value of Chatbots in assisting learners to receive an interactive learning process

Students are allowed to use Chatbots to ask questions, receive responses, and obtain personalized help. The incorporation of Chatbot systems in education has personalized online learning, making learning materials accessible to students anytime, anywhere. The introduction of Chatbot technology

aligns with the evolving nature of education, responding to changes in the professional sector and the increasing demand for Artificial Intelligence (AI) in teaching and learning. (Ondas et al., 2019)

Chatbots are designed to boost student learning interest, cognitive skill acquisition, and overall achievement, as proved by many researchers such as Lin & Chang (2020), Murad et al. (2019), and Troussas et al. (2017) The review identifies the potential ability of Chatbot in enhancing the educational experience and supporting personalized learning sessions for students (Okonkwo & Ade-Ibijola, 2021).

1.4.4.1 Chatbots and Intercultural Communication

Successful integration of chatbots into the intercultural educational field can yield an outstanding achievement, but this is contingent upon ensuring that they are programmed to respect cultural values and automatically adapt to diverse cultural biases. Consequently, researchers should focus on methods of programming chatbots to accurately consider different cultures and, cultural nuances, increasing their potential for application in the intercultural learning process. In addition, researchers should study how chatbots can make meaningful cross-cultural communication easier.

Considerable effort has been invested into enhancing the powerful systems of chatbots, aiming to apply an unlimited number of language techniques to create the impression of an embodied agent. Developers are dedicated to enhancing the persona of their chatbots by designing well-detailed algorithms that align with diverse cultural nuances. (San sonnet et al., 2006).

These types of chatbots undergo intricate systems and natural language processing for programming. Thus, they can have a robotic conversation with mostly pre-generated responses the reason why it does not give the user the flexibility to practice a very open conversation, where the user can lead the conversation which is done using natural language processing. Furthermore, the conversations are very basic since the bot has no access to answer complex questions, on the other, they are quite sensible and can provide close to humanized which users will feel that the conversation is realistic (Dahiya, 2017).

1.4.4.2 Blending Chatbots with Students' Abilities

Despite the significance of integrating chatbots into the learning process, there has been a limited number of studies addressing this area, considering the modernity and advancement of technology. The fusion of this remarkable invention with students' intelligence may present an impressive idea, enabling each student to experience personalized learning and fostering greater cultural awareness. This approach could enhance both academic performance and the acceptance of cultural diversity.

Elevating human cognitive work to creativity and meaningful sense-making domains is essential. AI can highly perform routine cognitive tasks in many domains that humans can not. As a result, humans are obliged to elevate their cognitive work to an area where AI is less capable. Knowledge practices, such as sense-making and meaning-making will grow in importance. Similarly, creative actions, such as brainstorming and divergent thinking will become more important capabilities. Furthermore, integrating AI outputs into human knowledge systems is obligatory. When AI produces an output, it needs to be acted on by a human being. Even in cases where decisions are made rapidly by AI at a level that humans cannot, such as automated stock market trading or risk detection by security software, humans remain the main responsible at the aggregate level. Skills to process and methods that support the integration of AI outputs into human systems will enable timely decision-making and sense-making (Markauskaite et al., 2022)

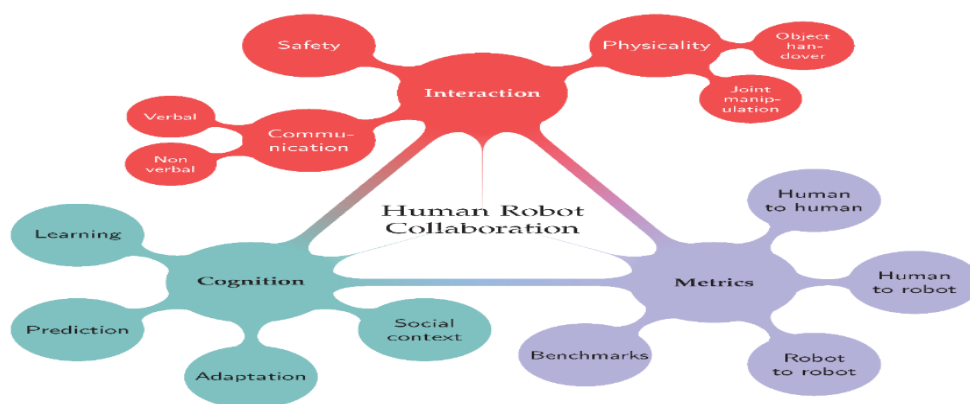


Figure 4: Robots and human cognitive skills collaboration(Castro et al., 2021)

1.5 Conclusion

To conclude, this chapter explores the integration of multiple intelligences and chatbot technology as an approach to enhance teaching and delve into cultural and intercultural aspects within language education. This approach aims to provide students with a comprehensive learning experience while promoting cultural diversity acceptance and introducing concepts like cultural intelligence. The underlying concept of this research is to combine human expertise with technological assistance to adapt to the ever-evolving landscape of education. By embracing this unified approach, we can ensure that students receive the highest level of instruction while staying abreast of the latest advancements in the field.

Chapter Two

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2 Chapter Two:

2.1 Introduction:

This chapter is dedicated to the detailed presentation of the data collection tools that will be used to gather essential information for this study. The chapter starts by providing a comprehensive overview of the chosen data tools, followed by a discussion on the identification of the study's objectives and the target population. Furthermore, the chapter outlines the process of designing questionnaires tailored for students and specific interview protocols for teachers. This chapter serves as a core element within the dissertation, presenting a detailed examination of student intelligence, while also exploring the use of AI chatbots to enhance their intercultural knowledge.

2.2 Research Methodology

The research methodology is intended to provide an appropriate framework for a study. A very significant decision in the research design process is the choice to be made regarding the research approach since it determines how relevant information for a study will be obtained; however, the research design process involves many interrelated decisions (Knowles, & Cole, 2008).

2.2.1 The Study Design

A research design is simply the framework or plan for a study that is used as a guide in collecting and analyzing the data. It is a blueprint that is followed in completing a study. Research design is the blueprint for the collection measurement and analysis of data. Actually, it is a map that is usually developed to guide the research

For a more precise data collection, our study relies on both quantitative and qualitative data, to analyze and examine the intercultural awareness of EFL (English as a Foreign Language) students and the effectiveness of merging AI chatbots with their intelligence to teach ICC. As the study focuses on EFL master's level students, the incorporation of data collection will be based on a mixed-method approach.

2.2.2 The Mixed Method

The combination of quantitative and qualitative data is essential, in a way that makes sense and clarifies research questions. Additionally, it provides a logical ground, methodological flexibility, and an in-depth understanding of minor cases. (Maxwell, 2016)

2.2.2.1 The Quantitative Method

To achieve a comprehensive data gathering, this study begins with a survey. Student participants are introduced to a survey comprising 20 questions divided into three parts as follows: *Intercultural Skills, Student Abilities, and AI Chatbots.*

2.2.2.2 The Qualitative Method

The quality of information is highly valuable. Therefore, qualitative data tools are also applied. The process commences with the qualitative part of the student survey, in which students are expected to provide a critical perspective on the topic. Then the study shifts to interviewing teachers, as this stage provides more reliable data that can be easily analyzed. Finally, as the final step of data collection, classroom observation enhances accuracy and clarifies the research aim and focus.

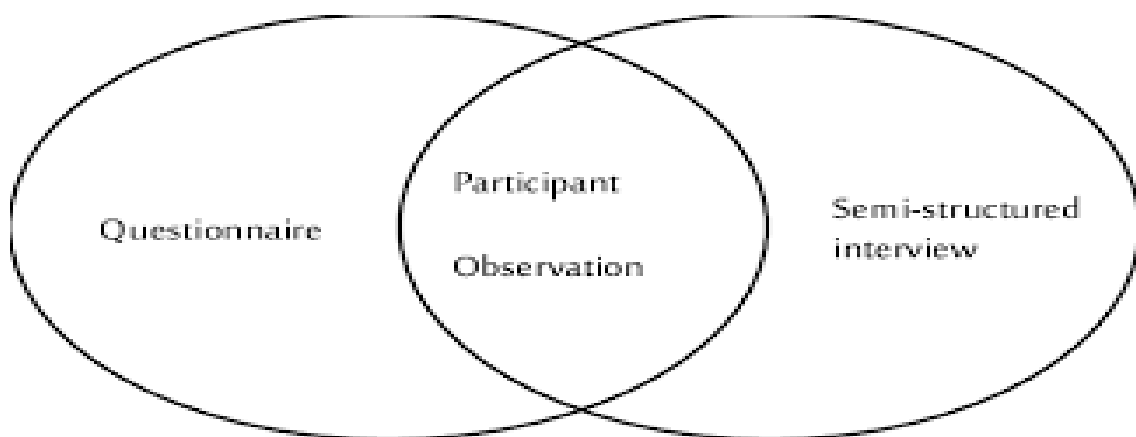


Figure 5: Demonstration of the Mixed Method “Triangulation Method” (Al Shlowiy,2022)

2.2.3 Data Collection Tools

In the early stage, the questionnaire functions as a core element, allowing us to obtain a comprehensive overview of student perception of intercultural awareness, multiple intelligence theory, and the impact of chatbots on all these aspects. This questionnaire is specifically designed for EFL master language and communication students, examining their type of intelligence, how they tend to receive information, and the way chatbots can assist them. So we can have an overview of EFL students' impressions concerning the implementation and contribution of AI chatbots besides multiple intelligence theories to enhance their cultural awareness.

Then, teachers are acquainted with an interview session through which they respond to significant inquiries. The objective of this interview is to explore and comprehend the teachers' perspectives on the integration of AI chatbots within the learning process, while also evaluating its influence on their cultural awareness. Furthermore, emphasis is placed on the significance of multiple intelligences through which learners will be introduced to more personalized learning methods. They are also expected to critically discuss these elements based on their teaching experience. This involves explaining students' ICC developmental challenges and strategies, how they use their dominant intelligence to enhance it, the role of AI chatbots in this entire process, and the most effective way to invest in both AI chatbots and students' intelligence in order to enhance cultural awareness.

Lastly, light is cast on the examination that addresses the crucial aspects of students' behavior and interaction within the classroom. During this specific stage, our emphasis lies on decoding the interaction of students' non-verbal behavior, particularly focusing on their physical and communicative behavior during oral expression and E-learning sessions. This observation affords us a comprehensive understanding of how culture can impact language proficiency and student's communicative competence. It also examines the way students can manipulate their intelligence to perform effective communication.

2.3 Aim of the Study

This study aims to examine the incorporation of AI chatbots alongside MI (Artificial Intelligence tool and Multiple Intelligences theory) into the learning process to enhance and foster cultural awareness. The research seeks to question whether this blended learning method can effectively empower students' cultural diversity acceptance and boost openness toward different communities. It sheds light on the equal importance of culture and language in this context. The strong connection between AI chatbots and MI is extensively discussed in the research, with AI chatbots being unable to fully replicate human abilities and fully replace teachers in terms of providing human-centered information and knowledge. In contrast, MI theory involves several dimensions of human intelligence, targeting different areas of the brain. In this specific approach, the light is cast on personal and interpersonal intelligence (emotional and social intelligence), which are aspects that AI overlooks.

2.4 Participants

As a researcher, the selection of appropriate participants holds a significant role in the entire research process. It is a process in which we should carefully select the right population not only to gather more data but also to prioritize the quality of this data. The information collected from these participants since this information is directly affecting our conclusion of this whole topic.

Working with a sample involves different steps, including sample size estimation, identification of the sample frame, and selection of the sampling method to be adopted. (Martínez-Mesa et al., 2016,p6)

2.4.1 Sample Profile

Throughout the research, it is very crucial to carefully select the population. This step decides our study destination, and focus and directly affects the final results. To establish the right sample size, three factors typically need to be stated in addition to the population size and study's purpose: the degree of variability in the characteristics being assessed, the degree of confidence or risk, and the amount of accuracy (Miaoulis & Michener, 1976)

2.4.1.1 Students

In this study, The decision has been made to select a specific sample. Our target population is master one and two language and communication. This selection aims at acquiring detailed and high-quality data. During the data collection phase, the goal is to identify the most suitable population that can offer valuable and reliable information. As a second reason, language and communication students tend to use communicative abilities and AI chatbots more than other specialties, due to their program's emphasis on intercultural communication.

This type of method can be particularly relevant for language and communication students, as many of their modules focus on improving learning through technology and enhancing cognitive skills. The aim is to foster intercultural competence for comprehensive and effective communication, which is the central focus of our research.

2.4.1.2 Teachers

For more accurate data collection, the study opted for EFL master teachers. We chose this category of teachers regarding their experience and efficiency as they have sufficient knowledge about their student's abilities and behavior. An interview is typically designed for master 1& 2 educators. Teachers play a pivotal role in gauging the interaction and awareness of students' behavior, motivations, and tendencies during lessons. While delivering a course, a teacher can discern whether the teaching environment fosters the development of cultural awareness. Furthermore, they can identify challenges in aligning the student's intelligence with the learning environment and explore how chatbots contribute to enhancing their abilities. as the study takes also into consideration the teacher's point of view.

2.5 Questionnaire

Before delving into the content and the aim of the research, the initial step is to define what the questionnaire encompasses, including its type and the key points it covers. The questionnaire must be tailored to align with our research goals. It is crucial to design a questionnaire capable of eliciting the desired responses essential for our study.

“A questionnaire is a set of questions to be asked from respondents in an interview, with appropriate instructions indicating which questions are to be asked, and in what order. Questionnaires are used in various fields of research like survey research and experimental design. The questionnaire serves four functions—enables the data collection from respondents, lends a structure to interviews, provides a standard means for writing down answers and helps in processing collected data.”(Jones, et al.,2013)

2.5.1 The Students' Questionnaire

In this particular study, a questionnaire is distributed among EFL language and communication master students. This survey aims to provide us with a total examination of three important aspects: intercultural skills, students' abilities, and AI chatbots use.

2.5.1.1 The Aim of the Questionnaire

The questionnaire is specifically designed for EFL language and communication master students at the University of Abd EL Hamid Ibn Badis, through this questionnaire we are aiming to collect explicit data in order to have precise responses. This comprehensive analysis looks at the way students interact in the classroom and proposes specific questions about their perspectives on artificial intelligence (AI), chatbots, and multiple intelligences, in addition to the extent to which they believe these tools could support them in developing a strong intercultural communicative competence and provide them with personalized learning. This data collection tool sheds light on three key elements as following: intercultural communication, multiple intelligence theory, and AI chatbots

Intercultural communicative competence is considered the core element in our study. This survey aims to interpret and examine students' levels of cultural awareness, identifying the specific areas that require enhancement for the development of this competence. It is highly suggested that English language courses emphasize intercultural awareness tackling all the aspects of cultural values and highlighting languages to encourage students to become cultural observers and analysts, discover. (Alptekin,2002). According to Hall, there is an interrelated relationship between culture and communication, therefore questionnaire must analyze students' cultural background and how they tend

to use it in any communicative situation « Culture is communication and communication is culture”(Hall 1959, P2017).

Gardner claims that intelligence is psychologically linked with culture and he defined it as an ability that can be activated in social settings to access information and solve problems, he added that this capacity varies from one culture to another. So intelligence can be considered as a face of multiculturalism and a skill that can be used to interact with different cultures “Intelligence is biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture” (Gardner, 1999, p. 33-34).back to our questionnaire through questions we are intentionally targeting this area in which we are intensively focused on the relationship of EFL students type of intelligence and how they manipulate it in order to master intercultural communication.

The AI chatbot is a powerful invention with an impressive ability to analyze questions and generate concrete answers through its algorithm. This capability allows users to access an unlimited amount of information and engage in real conversations, providing a platform for practicing language skills and evaluating communicative abilities. However, in today's context, it is crucial for AI chatbots to adopt a system that facilitates communication involving intercultural interaction and human-like conversations. These qualities of AI chatbots can be particularly beneficial for English as a Foreign Language (EFL) students, enabling them to practice intercultural communication in the target language, based on their abilities, outside the traditional classroom setting. During the survey, we inquired about students' perceptions of AI chatbots, how they view this technology, and the ways in which they intend to use it.

2.5.1.2 The Description of the Questionnaire

The study survey commences by identifying the main points that it going to be tackled. It starts with a brief introduction about the general idea of the topic and the way it is planned to connect these elements to get concrete results. This questionnaire's purpose is to test students' intercultural knowledge, analyze dominant intelligence among EFL master students, and how they tend to manipulate it during

communication, based on their abilities. The survey also focuses on how students intelligences can be merged with AI chatbot assistance. This combination process aims to enhance intercultural competence which is the main ground of our research.

The first question seeks to interpret students' perceptions of culture and whether they believe that culture is essential in their language learning progression. this question aims to test their cultural awareness. The second session also examines the impact of intercultural learning on English language acquisition, the effect of the ICC on language learning, and evaluating students' behaviors in the process. Furthermore, in the third question, we plan to ask about their experiences with communicative situations involving different cultures, the level of their readiness, and how they manipulated their abilities to manage such conversations. Subsequently, through the fourth, we explore the strategies they employ to enhance cultural awareness. Finally, at the end of the first part, we pose a significant question to see how they rate their syllabus to strengthen cultural awareness within the context of English as a Foreign Language (EFL) instruction. This section offers the research a comprehensive overview of students' intercultural competencies and the extent to which they consider culture during their target language acquisition. The objective of the final question is to observe students' receptiveness to the current program. Based on this assessment, recommendations for syllabus modifications can be proposed

The next five questions encompass a detailed analysis concerning the student's brain capacities this particular part sheds light on the possibility of having different types of intelligence in one classroom. the first question students are asked to give their opinion on the effectiveness of receiving instruction based on each student's type of intelligence. This question provides us with an idea about the student's perception of the multiple intelligences theory

Furthermore, in the following question, the survey evaluates the skills that students excel which identifies the dominant skill among EFL students. Question number nine aims to explore their problem-solving techniques and their favorite strategies to receive information, these two questions identify the student's intelligence and their readiness for different strategies. the next question analyzes the learner's

ability to collaborate with others to evaluate their SI. These questions enable us to identify the students' dominant intelligences. Moreover, the final questions aim ? to examine the significance of emotional and social intelligence in the development of communicative competence. This part seeks to identify the predominant intelligence and explore its optimal application both within and outside the classroom.

This process allows us to assess the most effective methods for students to absorb information and how such approaches can be integrated with AI chatbot technology to elevate their intercultural communicative competence

The final questions shed light on the significance of AI chatbots, due to world changes and technological advancement integration of AI chatbots became crucial, question eleven interprets the usage of AI chatbots among students, which clarifies the relationship between students and AI chatbots. Question twelve explores how it affects their learning progression This part is a detailed analytical process in which we ask the students about their use of AI chatbots, and how much they rely on it, Through the next we discover how much AI tools impact their interaction in and outside the classroom .in question fourteen the students are also expected to give their opinion concerning the way they tend to use Ai chatbots to complete assignments and whether they think that it enhances their cultural competence through generating human-like conversation that encourages cultural acceptance.

The last two questions aim to examine the student's perception concerning the teacher's replacement by the AI chatbots, the questions seek to see their prediction about the future of AI tools in the educational field.

The survey also seeks to access the EFL student an opinion concerning the implementation of AI chatbots and their intelligence to target intercultural awareness

2.6 The interview

The interview is considered the most intricate data collection tool, it is important to know what to ask and what to avoid. In this particular stage, we are not looking for quantity instead we are focusing on the quality of the information

The common use of qualitative interviews is also undoubtedly due to their potential to provide in-depth information related to ‘participants’ experiences and viewpoints of a particular topic’ (Turner,2010, p754)

2.6.1 The Teachers Interview

Kvale and Brinkman (2009) state that designing the interview might appear so simple, however, it is an intricate process. A well-constructed interview preparation is a complex process even though it may seem easy to do.

2.6.1.1 The Aim of Teachers Interview

For this interview, we select a specific population of master one and two EFL teachers. Through this qualitative data collection tool, the study aims to observe the teachers' opinions on the importance of intercultural communicative competence (ICC), the use of multiple intelligences in the learning process, and the integration of AI chatbots, using semi-structured interview. This interview encompasses theoretical questions related to the topic in order to assess their perception and whether they view it as an applicable method that could have a significant impact on the entire Algerian educational system. It is crucial to emphasize the teachers' opinions and view the topic from their perspective since educators have the authority to apply any method and enough flexibility to shape their syllabus.

Through this process, the study seeks to target their acceptance of the current domination of AI chatbots. Teachers are expected to suggest new solutions that can help control and guide the students' usage of AI chatbots. They were also expected to propose techniques aimed at enhancing students' intercultural awareness by merging the use of both AI chatbots and students' abilities.

Furthermore, we shed light on the idea of receiving information based on each student's abilities. During this interview, we examine their perception of students' intelligence and how it can be best applied to develop their cultural awareness. It is also important to shed light on how personalized learning is offered through this approach.

The first question highlights the challenges that most educators face in fostering the student's cultural awareness, this question can clarify the study's vision by highlighting the obstacles and common problems among the students in ICC learning. In the second question, teachers are expected to discuss how the generation's difference plays a role in the learning process, especially in AI chatbot use, As students are more familiar with digital tools than the teachers. The interview contains twelve questions classified as follows:

In the next question, teachers are supposed to give their feedback on the current program and suggest modifications that can be highly effective for intercultural competence development. Question four examines whether Generation Z tends to have greater cultural awareness since they are born in the digital era where the distance can not prevent people from sharing ideas thoughts and cultures. The next question delves into a more complex area in which educators are supposed to give their opinion on the possibility of using AI chatbots to assist students in enhancing their cultural awareness.

The next question continues to highlight the crucial role of human intelligence in ICC development, this question tests the teacher's perception in augmenting the human intelligence and AI chatbots use for fostering the student's cultural background. Question seven extends to highlight the most dominant intelligences in EFL classes. the interview shed light on the overreliance of AI chatbots among EFL students, teachers are expected to express their feelings and give instructions. Since they can not control the student's AI use, teachers are asked to propose solutions in order to solve this problem, this question holds a critical discussion on how educators can inspire their students to use AI chatbots correctly. After tackling the most points individually

The following two questions come to identify the study's main focus by introducing the idea of elevating students' ICC by combining the use of AI chatbots with multiple intelligences theory. The aim is to analyze whether the teacher will accept or refuse the research idea

Lastly, teachers should express their future vision of AI chatbots and whether they see that AI is a risky invention that threatens their existence in the educational system.

2.6.1.2 The Teacher Interview Description

Farr (1982) states that the difference in perspective between the actor and the observer is a significant angle that we should spot in the interviewing process. This relates to the distinction between self and other. Bearing in mind that, there are different social (traditional, cultural, political, religious, etc.) factors of the participants, which guide the dialogue during each interview situation (Kuzmanić, 2009). Particularly, this research requires a qualitative tool which is: a teacher interview therefore, this interview can be described as an academic professional semi-structured data collection tool that sought reliable and truthful information that enables us to reach concrete results

The study applies semi-structured interviews since they offer a highly flexible strategy for small-scale research (Drever, 1995). Additionally, semi-structured interviews are considered the most suitable technique in the case of teachers. Indeed this method seems to provide more reliable data when the sample size is relatively small. It also allows thematic analysis of the qualitative data (Pathak, & Intrat, 2012).

"Semi-structured interviews allow you to be focused on the topic of interest while still giving you the autonomy to explore relevant ideas that may come up during the interview. Qualitative researchers use semi-structured interviews to collect new data and explore participants' thoughts and beliefs about a particular topic (Delve, & Limpaecher, 2022, no page)

Additionally, we divide our interview into five meetings, in which five EFL master teachers are selected based on their modules and availability. The interview takes 10 minutes for each teacher. During this time, teachers are expected to give their honest views concerning the following aspects: their experience of involving the ICC in their teaching, how they see students' abilities, and the implementation of AI chatbots finally we reached the conclusion on whether they view the idea of merging the Ai chatbots with students ability works for developing student intercultural communicative competence

At last, we design this interview in a way that can suit and adapt to participants' needs and views through which is not guided by script and tends to be more natural. This interview is a well-structured procedure designed to meet the individual needs of participants, enhancing the quality of data collection. It facilitates a more natural and open conversation for participants to express their thoughts and beliefs. This Interview could also expand the scope of the study and explore new ideas. By interviewing teachers, we aim to broaden our research vision, addressing the perspectives of both students and teachers to enhance the validity of our findings. To provide a comfortable environment, we obtain teachers' consent regarding recording their voices. We value academic ethics, and teachers have the freedom to choose between a voice-recorded interview or note-taking as per their preference.

2.7 Observation

This section delves into a total examination of the behavior and intercultural awareness of mastering one language and communication students. This observation is conducted precisely to study the master's student's communicative skills and classroom interaction other words, the analysis focuses on the students' ICC and the way they use their cognitive skills and abilities to communicate effectively. The teacher's influence in fostering their cultural knowledge will be highlighted as well. Considering the topic's goal of creating modern blended learning methods, direct observation is essential. Consequently, it has to be underscored.

2.7.1 The Classroom Observation

One of the most important techniques for studying and evaluating teaching, or measuring and assessing the efficacy of instruction, is classroom observation. The information obtained from classroom observations is typically enhanced by supporting documentation from several sources, including student performance reports, administration reviews, instructional materials reviews, teacher self-evaluations, etc. Nonetheless, the most direct way of evaluation that offers information about how teachers actually teach is through classroom observation (MacDonald,2016).

Through using classroom observation in this research, the study seeks to explore students' level of intercultural awareness and how they interact in the classroom. The research selects oral expression and E-learning sessions to be the center of our observation. During the lecture, students are supposed to act spontaneously as they did their regular presentations and classroom activities. At the end of the session we obtain an overview of student's communicative skills as they speak in the target language, vocabulary and body language use will also be taken into consideration. It is also essential to focus on their cognitive skills and intelligence as much as their classroom behavior, interaction, and confidence, putting the spotlight on their brain abilities variation, therefore, a well-designed checklist facilitates the interpretation of the communicative skills and the way they tend to use their brain abilities and intelligence to communicate effectively besides their behavior and intercultural skills the influence of the current technology on their communicative skills is highlighted as well.

The first section of the checklist focuses on language proficiency and mastery of intercultural communication, encompassing verbal and non-verbal communication and language fluency as well as macro language skills (listening, speaking, reading, and writing). Then, we shift to examining different types of intelligence based on behavior and interaction, enabling us to interpret, analyze, and reach clear conclusions. Finally, the role of the teacher is emphasized by observing their impact and influence on student motivation and behavior, especially in guiding them regarding the use of AI. The observational process requires detailed interpretation through the attendance of both e-learning and oral expression sessions, through which we are investigating the way the students acquire knowledge and communicate effectively through the use of their specific brain abilities. Yet, since intelligence varies from one class to another or one student to another, the study is not able to cover all cases. As a result, the main purpose of this observation is to notice the dominant intelligence in one classroom and how they develop their intercultural communication based on these abilities. Accordingly, the class master of Language and Communication will be taken as an example of how much intelligence a classroom can hold.

2.7.2 The Observational Instruments

The observation encompasses observational instruments and recording tools, each with its specific function. Evertson and Green (1991) classify these procedures into four main stages strongly related to each other as follows:

- **Category systems:** These structures include checklists of preset categories (mainly, particular behaviors of educators and/or learners) to be counted and/or rated during the course of the remark ending. These observational devices are of the highest quality predetermined and very methodical observational techniques. This strategy is highly emphasized during the observation, designing a well-structured checklist facilitates the interpretation of their behavior and abilities.

- **Narrative system:** These systems are made to produce in-depth, context-specific textual descriptions of actions or other events that happen in the classroom, much like the descriptive systems. Nevertheless, since the narrative systems lack predetermined classifications and are even more flexible, they often record a wider range of events and may provide a more comprehensive account of what is being observed. In this study case, our focus during the observation is on two aspects (intercultural competence and student intelligence). Therefore, This technique seems to closely match the observation aim, since the light is cast on observing their behavior we need a certain depth. However, this technique is not necessary during the observation

- **Technological system:** These observational technologies gather an enormous amount of concrete data, providing a record that may be examined by several evaluators. However, the recordings only record the data without any evaluation, this can be advantageous or disadvantageous, depending on the reasons behind the classroom observation. Additionally, since this research necessitates a detailed evaluation of classroom events the technology system should be avoided.

- **Descriptive systems:** The purpose of these systems is to track target behaviors as they naturally occur in environments like classrooms. Similar to category systems, descriptive systems could also use pre-established categories to guide or emphasize the process of observation. These systems, however,

are more flexible: the observer will document descriptions of the behaviors, paying attention to context-specific factors and how the environment affects the behaviors, rather than just counting or ranking the occurrences of the behaviors. This tool seems more suitable to use for this particular study, this specific observational process is a detailed analytical technique that aims to observe student's communicative abilities and the way they perform language with a high amount of intercultural competence using their abilities.

The Observation Aim

This direct structured observation of students in the classroom provides insight into their multicultural awareness as well as their classroom interactions. we select oral expression and e-learning sessions to be the center of our observation. during the lectures, students are supposed to act spontaneously. By the end of the M1 Language and Communication oral expression and e-learning session, we will be able to gather an overview of the student's communicative abilities and examine the following objectives :

- The language proficiency: Evaluating the student's linguistic abilities, including vocabulary and grammar usage, throughout the observation process.
- Noun Verbal Communication: Identifying and analyzing non-verbal communication cues such as body language, facial gestures, and linguistic patterns.
- Cultural sensitivity, the real interaction with the audience, And adaptability: Assessing the student's proficiency in managing communication through emotional and social intelligence.
- Intercultural skills: Examining the student's cultural awareness and adaptability (cultural intelligence), as well as their level of assimilation of native habits.
- Problem-solving and the manipulation of students' intelligence: Investigating how students utilize cognitive abilities to facilitate effective communication and prevent misunderstandings

- The overall impact: Examining the overall impact of student presentations, including audience interaction, content organization, and their contribution to fostering intercultural communication.
- The AI chatbot's impact: Observing the influence of AI chatbots on student performance, classroom interaction, and their ICC.
- Students's different abilities; Analyzing and distinguishing students' various cognitive abilities and intelligence according to the Multiple Intelligence Theory.
- Teachers impact: Comprehensive observation of how teachers influence students' intercultural communicative competence and communication skills.it is also important to emphasize the use of multiple intelligence theory to offer more personalized learning, allowing students to master the art of communication.

2.8 Data Analysis Procedure

By employing different techniques, data analysis can engage with data systematically while creating a "logical chronology" for the integration of various procedures. **(Richmond, 2006)**. In the context of this study, the survey that is distributed to EFL students receives more than forty-nine answers. Furthermore, teacher feedback is obtained through interviews, providing them an opportunity to discuss the topic and express their experiences. Lastly, a thorough direct observation is conducted using a well-designed checklist. Considering this study has significance for examining from a variety of perspectives, including teachers and students, combining quantitative and qualitative data-gathering tools is an intricate process that requires extensive planning for systematic analysis.

In qualitative data analysis, the first step involves systematic structuring of direct observations for Master's students in language and communication. During oral presentations and eLearning sessions, students are tasked with presenting their topics as they typically would in their regular sessions. The primary focus lies in evaluating their abilities and intelligence and how they apply these traits to master intercultural communicative competence. The observation process also sheds light on the students'

various types of intelligence and their preferred learning methods, achieved through designing well-structured checklists tailored to their interests and behavior. The completed checklists are transcribed and analyzed, leading to conclusive insights. Additionally, interviews play a vital role in eliciting teachers' perspectives on the topic. Each teacher is expected to discuss and explain their viewpoint based on their teaching experiences.

There are various phases involved in the analysis of qualitative data obtained from observations and interviews. To create a written record of the data, the first step is to accurately transcribe the observations and interviews. To fully comprehend the data gathered, it is important for researchers next immerse themselves in the material by reading and rereading the transcripts and notes. The material is then categorized and organized by using themes and patterns that show up in the data. To put related concepts together, researchers often code the data in this process, giving labels to various informational segments. The qualitative qualities of the data are analyzed by the use of thematic analysis in interview questions. We can get inferences and insights from the data by examining the connections between various themes and categories once the data has been coded. Finally, we write a report or present their findings, often including quotes or examples from the interviews and observations to support their interpretations. Throughout the analysis process, the study also engages in member checking, where they share their findings with participants to ensure that their interpretations align with the participants' perspectives.

In quantitative data analysis, An essential stage involves distributing surveys not only among Master's students in language and communication but also among those in other specialized EFL Master's programs. The survey is chronologically organized, with questions divided into three main sections. The first section focuses on intercultural skills, analyzing students' knowledge about culture. The subsequent section delves into their cognitive abilities, aiming to examine and interpret how they effectively receive and absorb information, particularly language-related content. Lastly, the spotlight is on students' use of chatbots, assessing not only the extent of their usage but also their future

perspectives regarding the advancement of AI chatbot technology. Each question's selections are totaled and presented as figures which illustrate the percentages of each option.

Any research project should start with the identification of its primary research questions and the establishment of specific objectives. However, it's crucial to take careful measures to guarantee the credibility and reliability of the data before diving into data analysis. This involves looking over the findings closely to spot any mistakes, missing information, or unresolved issues, and making sure the data is adequately prepared for a comprehensive statistical analysis. Researchers may not be able to securely draw significant inferences from their findings until this procedure is finished. In the following phase, descriptive statistics are used to summarize and characterize the data. This includes measurements of dispersion (like range and standard deviation) and the center of gravity (like mean, median, and mode), as well as graphical data representation (like histograms and box plots). The next stage is to apply inferential statistics to draw conclusions and inferences from the data. This includes periods of uncertainty, regression analysis, and hypothesis testing. This process allows us to generalize findings from a sample to a larger population and to test hypotheses about relationships between variables

2.9 Limitations of the Study

While this study has progressed well in terms of selecting an appropriate population and clarifying our path. Several challenges are blocking the attainment of precise and relevant results. Nevertheless, it is natural in any research progress to face occasional setbacks. A researcher can not cover all the aspects without missing some points. Even the most outstanding studies may unintentionally overlook certain elements.

At the starting point, This detailed study is limited to a particular region, As we are not able to reach all of the EFL master students in all universities. So, we have selected a small population to apply to this study approximately 85 students. Therefore, it is hard for us as researchers to claim that we can

generalize this study. Since student's perceptions of intelligence, culture, and AI chatbots could vary from one region to another.

Also, time is considered the most crucial element in any research or data collection; to get the highest quality of data and information that can easily be applied to our research outcomes, we need time. Our study is guided by certain periods where we have to do observation, interview teachers, and gather as many as possible responses to our questionnaire.”

Moreover, Since we have discussed the issues related to time, it is essential to highlight the immediacy factor. In other words, despite the trendiness of this topic, we should consider that this study may only be beneficial and reliable for a certain period. This is due to the evolving world changes and advancements in scientific research.

Then, our topic is considered one of the most controversial and sensitive studies. Especially when it comes to the integration of artificial intelligence in the learning process. The reason why examining the possibility of integration of AI chatbots and multiple intelligence theory to enhance our cultural knowledge based on both students and teachers might be intricate. The age gap between EFL master students and university teachers might be a problem in this data collection process.

From most teachers' points of view, AI chatbots represent a two-sided weapon that most students use either to cheat or to do an assignment, which makes the students lazy and weakens their linguistic and communicative ability. Instead, they prefer using multiple intelligences as a method to develop their intercultural awareness.

Additionally, gaining permission to conduct this study from the head of the English department should be mentioned as well. Besides convincing the teachers to do the interview was challenging even though most of them were kind and professional.

Besides that, during the observation, several difficulties appeared from analyzing student's physical interaction to interpreting their body language and seeing their linguistic communicative abilities.

Finally, since our research is evaluated as one of the most complex study areas, it encompasses a huge amount of information that we could not include all of them in one dissertation, due to the time and space that is required for a master dissertation. However, this research study is going to be an introduction to a PHD thesis.

2.10 Conclusion

This chapter provides an overview of the research methodology, commencing with the identification of the case study and the target population and with the selection of research tools. This chapter provides a summary of the research's progress and reflects an extensively planned approach designed to produce accurate and conclusive findings. To offer an in-depth examination and reliable results, we have also adopted a triangulation technique that combines three data-gathering tools: surveys, interviews, and observations. While the teacher interviews focus on theoretical and critical viewpoints on the topic, the questionnaire consists of twenty questions covering a variety of topics. Finally, observation sheds light on how effectively students performed in intercultural interactions and how they applied their cognitive capacities. With the use of this methodological framework, the study aims to produce accurate and supported results.

Chapter Three

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3 Chapter Three

3.1 Introduction

The final chapter highlights the results of this specific study, which are obtained through the data collection process. It emphasizes the analysis of each data-gathering tool and how the information is collected. The chapter starts with the questionnaire, presenting the results and analysis of each question. It then moves on to the interview's outcomes and a detailed discussion of the teachers' viewpoints on the topic. Lastly, the observation analysis is discussed, which includes a detailed analysis of checklist outcomes and student behavior. Following an extensive discussion and research, this study concludes with recommendations and suggestions aimed at integrating new implementations that can benefit not only the field of education but also future generations.

3.2 Data Analysis

3.2.1 Analysis of the Student Questionnaire

This survey consists of a variety of questions designed to delve into different aspects of our topic of study. twenty questions center on students' abilities, the use of AI chatbots, and intercultural competencies. Based on their own experiences and perceptions, students are requested to respond to these questions. It is specifically designed for students in the Master's one and two in language and communication. It includes a thorough analysis of each element in our study. The survey was completed by 49 students, and their responses varied from one question to the next. The following graphs provide a more detailed explanation of the results.

Question 01: Which age range do you belong to?

- A. 21-25
- B. 25-30
- C. More than 30

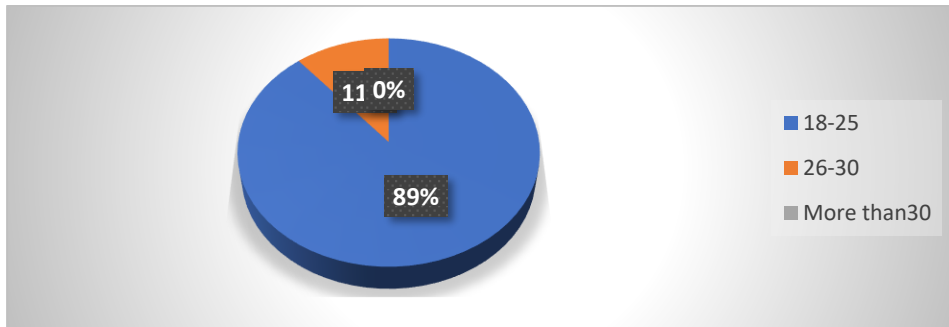


Figure 6: Gendre Variation

As shown in the graph above most of the participants are from the younger generation, based on the server's responses 85.9% of the target population is from Generation Z At the same time 11.1% of students are 26 years old or older. The identification of students' ages helps the researcher in the study's progression since the study highly focuses on intercultural communication and AI chatbot technology the student's ages play a crucial role in clarifying their perception of the topic.

Question 2:As an EFl student how do you see intercultural communication?

- A. Totally necessary – it brings the language to life
- B. Pretty important – helps avoid misunderstandings
- C. Not that crucial, focus on grammar and vocabulary

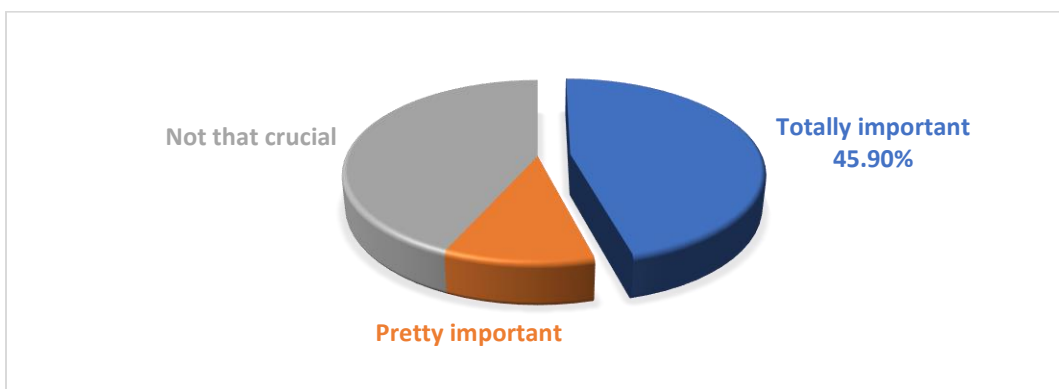


Figure 7: ICC Importance

The graph above presents the student's perception of the importance of intercultural communication as they learn the language. As it was expected 45.9% answered pretty important, while 43.2% of students said it is necessary and brings language to life; and finally, a few numbers of them ignored its significance and emphasized grammar and vocabulary more.

Question 3: How can intercultural learning affect your language learning? By

- A. Motivating me to learn English more deeply
- B. Encouraging me to communicate more effectively in English
- C. Increasing my confidence in using English with diverse speakers

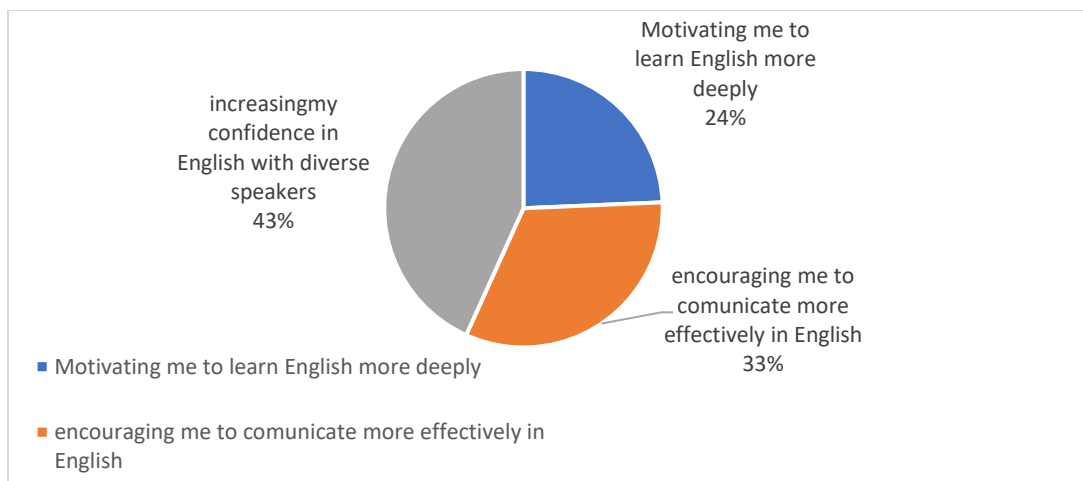


Figure 8: Intercultural Competence Effect

The research study examines the impact of ICC on language learning among students. The data showed that 43.2% of students believed that ICC could significantly increase their confidence in communication. Another 32.4% found that ICC plays an important role in promoting effective communication, and 24.3% viewed ICC as a source of motivation to learn English more deeply. The figure also demonstrates the diversity in student opinions based on their personal experience with ICC and its impact on language learning.

Question 4: how often do you find yourself interacting and communicating with people from other cultures?

- A. Never
- B. Occasionally
- C. Often
- D. always

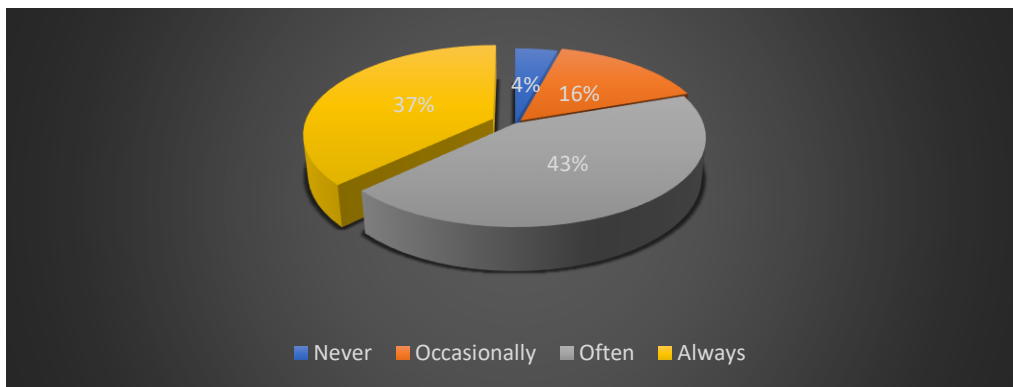


Figure 9: Students' Experience with Other Cultures

This question aims to interpret the level of students' integration with other cultures and how much they have experience in manipulating their IC knowledge in real life. According to the responses, 50% of the students said occasionally, and 30.6% mentioned often. On the other hand, other students (13.9%) voted never, and lastly with the lowest percentage a few numbers claimed that they always communicate and interact with people from other cultures.

Question 5 How do you rate the level of cultural awareness integration within your English and foreign language program?

- A. Excellent
- B. Good
- C. Fair
- D. Poor

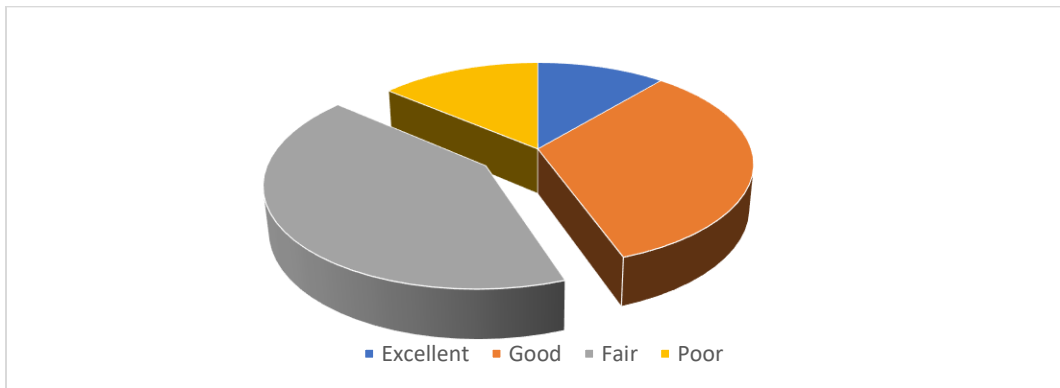


Figure 10: Evaluation of the EFL Program

At this stage, master students of language and communication are requested to rate whether their program develops their intercultural awareness as EFL students. The students' answers are objective 41.7% said it was fair, 33.3% think that it is a good program for teaching intercultural awareness among students, and 11.1% of the students found it excellent for elevating their ICC; However, 13.9% of the language and communication students argued that it is a poor syllabus that requires many modifications.

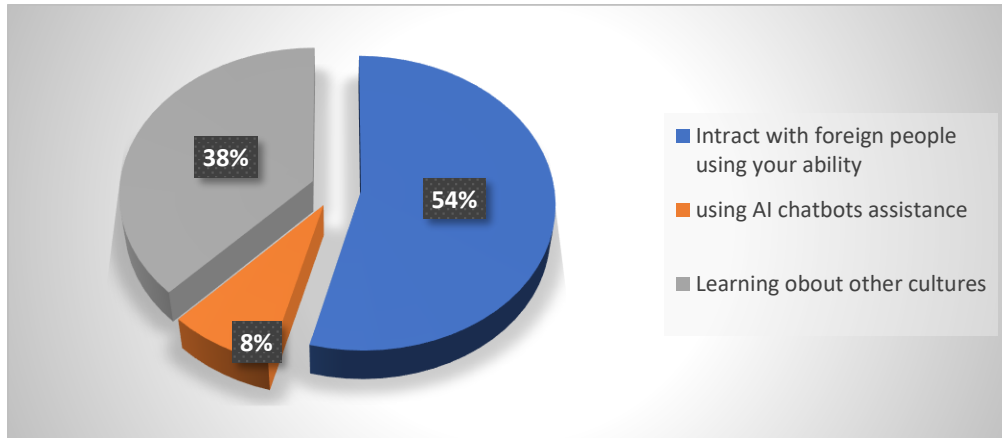


Figure 11: Students Oral Skills

The majority of students view interacting with foreigners using our brain abilities as the best way to enhance intercultural knowledge, 54.1% of students see real interaction as an effective strategy to know how to avoid any cultural misunderstanding.

Question 6: Do you face difficulties in expressing yourself orally?

- A. Never B. Occasionally C. Sometimes D. Often E. Always

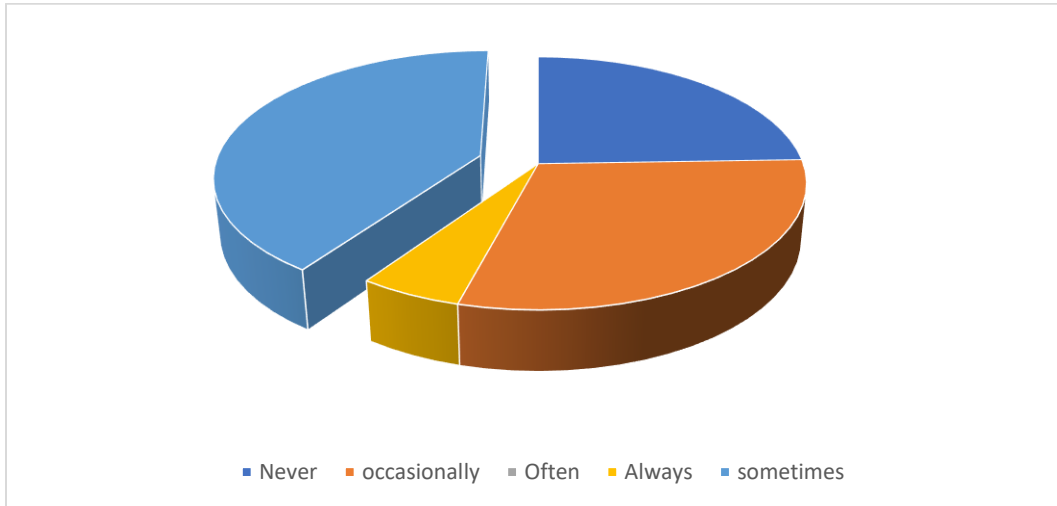


Figure 12: Students' Oral Gaps

The survey shows that over half of students rarely have difficulties with oral expression. Out of the participants, 40.5% said they sometimes struggle, 29.7% occasionally struggle, and 5.4% always struggle. On the other hand, 24.3% never experience problems due to practicing their language frequently.

Do you believe that tailoring instruction to each student's cognitive strengths(multiple intelligence theory) would enhance personalized learning?

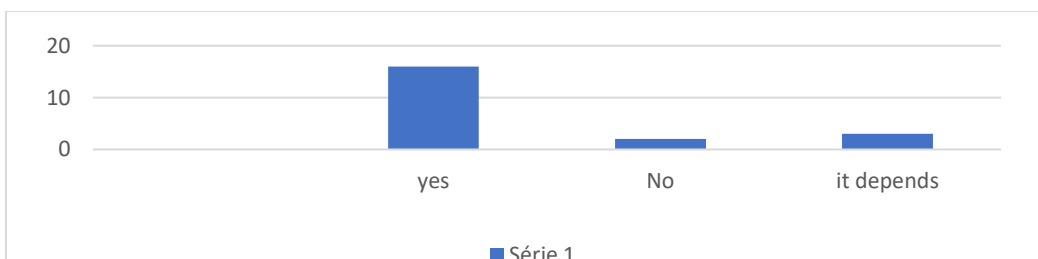


Figure 12 Students Cognitive and Personalized Learning

As it is presented in the previous graph students were expected to give their critical view concerning the multiple intelligences theory and the way it provides them with personalized learning. according to the survey's outcomes, the majority of the students agree on the importance of multiple

intelligences theory in providing more personalized learning. Furthermore, some students argue that it depends on students' abilities and teachers' flexibility. Lastly, a few participants think that MI theory does not provide us with personalized learning.

Question 9: as an advanced anglophone, which skill do you excel the most?

- A. Listening B. Writing C. Speaking D. Reading

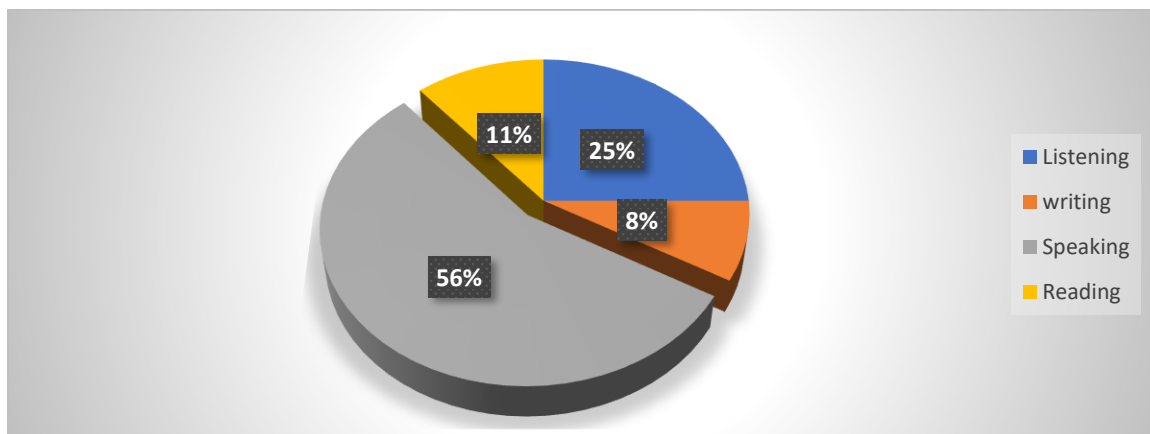


Figure 13: Students Dominant Skill

The results prove that the majority of the language and communication EFL students can master the speaking ability more than the other skills, then it comes the listening ability (25%) and reading (11.1%), and finally, the writing skill (8.3%). In conclusion, the most dominant skill among students speaking while the most neglected skill is writing.

Question 10: When you work in a group which role do you naturally prefer?

- A. The leader B. The manager C. The wisest D. You prefer to rely on other members

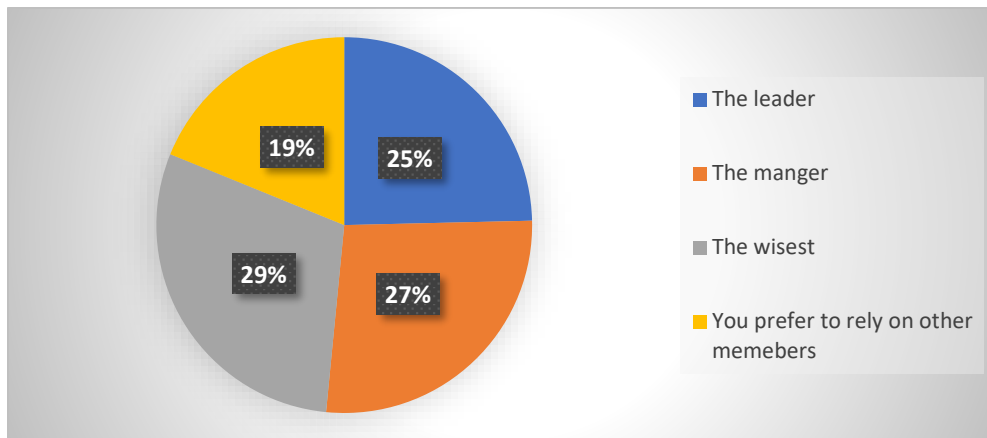


Figure 14: Students Social Intelligence

This question seeks to analyze the student's social intelligence, based on what the graph demonstrates, it could be noticed that there is a balance between student's roles during the learning process, which proves that they are socially intelligent. The graphs illustrate that 29.7% of the students prefer to be the wisest, 27% of them tend to play the manager role in the team, 24.3% choose to be the leader, lastly 18.9% of the participants prefer to rely on their members this category tend to have less social intelligence

Question 11: How do you typically approach to new information?

- B. Simulating scenarios
- C. AI-based learning
- D. Learning Strategies
- E. Inquiry-based learning

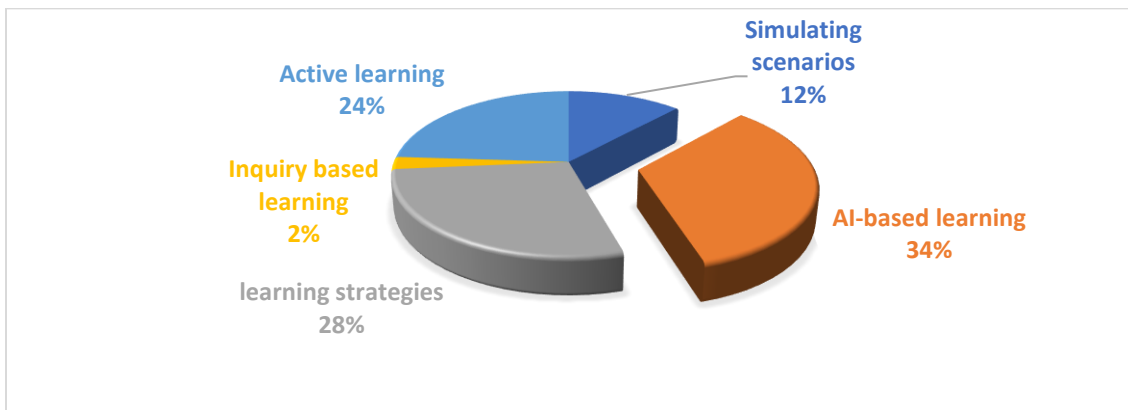


Figure 15: Students' Favorite Learning Method

This study aims to identify students' intelligence use and their strategies for approaching new information. It found that 37.8% of participants prefer artificial intelligence-based learning, 27% prefer active learning, 18.9% simulate scenarios, 13.5% adopt different learning strategies, and 2.5% tend to learn subconsciously.

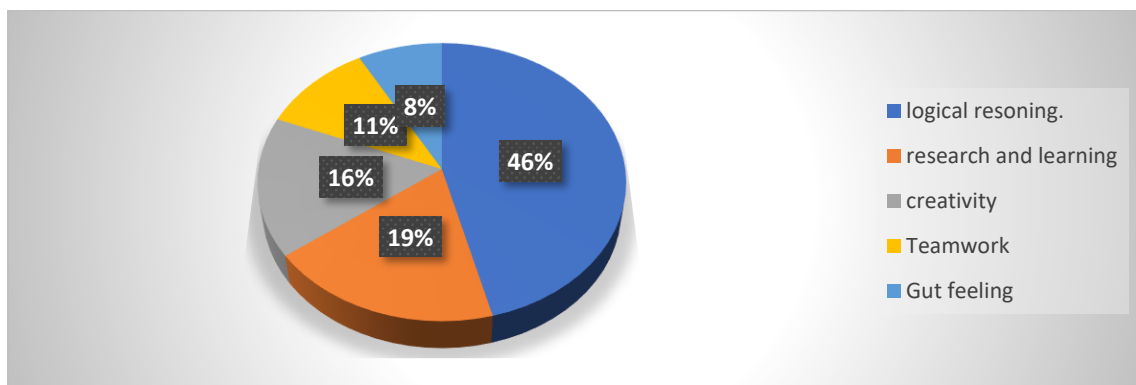


Figure 16: Students Learning Strategies

Problem-solving is also crucial in analyzing student intelligence, with 45.9% using logical reasoning, 18.9% using research and learning, 16.2% favoring creativity and brainstorming, 10.8% prioritizing teamwork activities, and 8.1% relying on intuition.

Question12: Do you believe that emotional and social intelligence is the main intelligence that we need the most in any communicative situation, especially with other cultures?

- A. Yes, absolutely B. Yes, to a certain extent C. Somehow D. Not at all

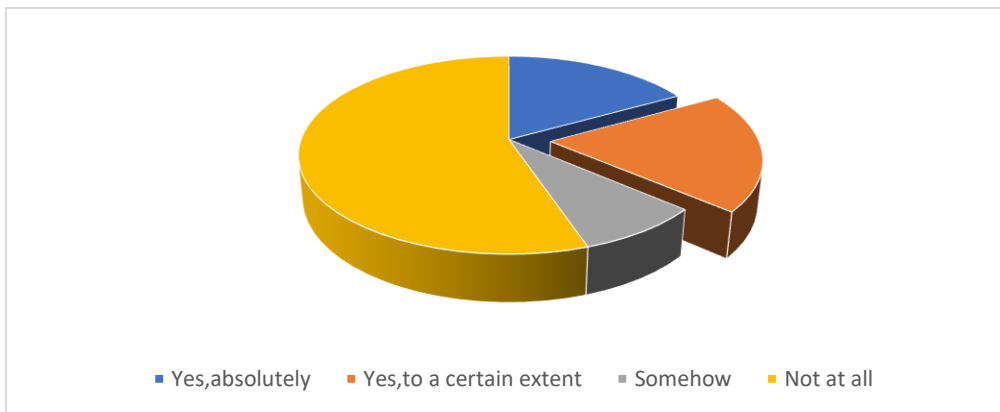


Figure 17: The Significance of SI and EI among Students

According to the findings, 42.1% of the students agree to some extent on the significance of emotional and social intelligence to interact and communicate effectively, 36.8% strongly agree with the idea, 18.4% said somehow and 2.6% disagreed.

Question 13: which intelligence (SI or EI) do you use the most when you are communicating or generating ideas to participate in any conversation in or outside the classroom?

A. SI

B. EI

C. Both

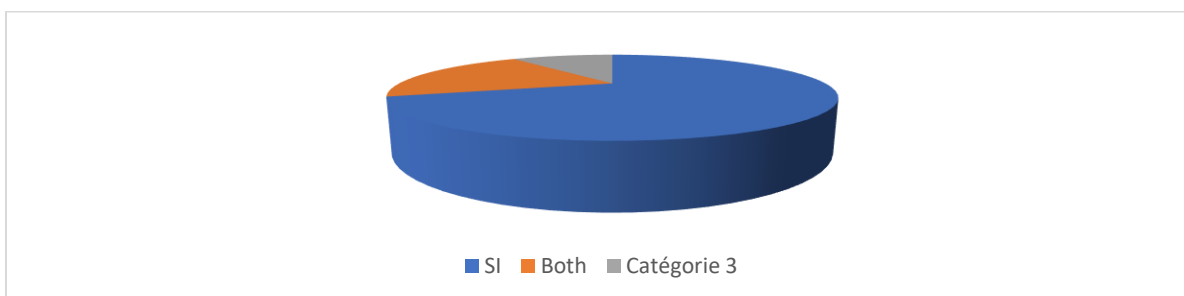


Figure 18: Student's Favourite Intelligence

The majority of students prioritize the SI over the EI (70%), 20% said both while only 10% voted for emotional intelligence. These results show the level of awareness of students about their intelligence use.

Question 14: How often do you use AI chatbots?

A. Never

B. Occasionally

C. Sometimes

D. Often

E. Always

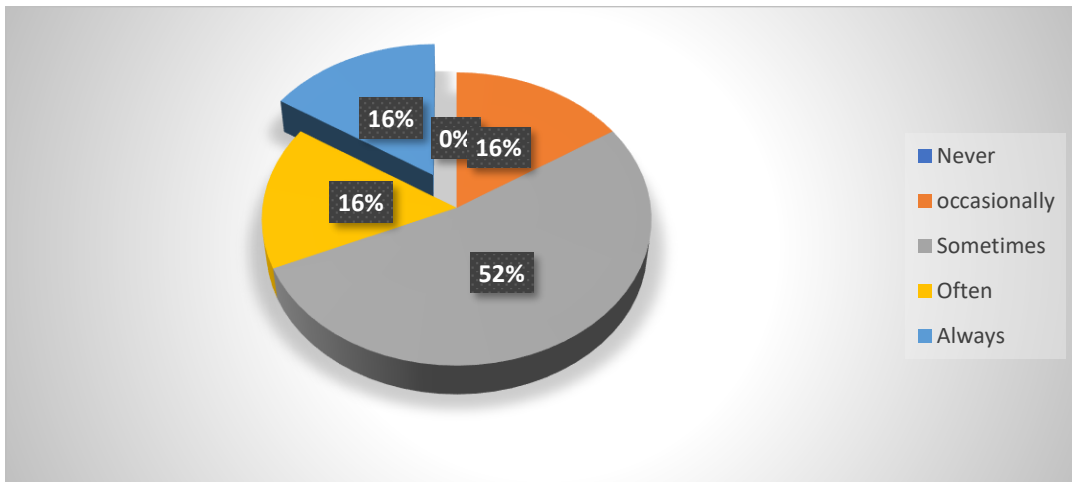


Figure 19: Students AI Chatbot Use

The survey also tackles the student's usage of AI chatbots, a question is imposed about how often the participants rely on AI chatbots in their daily lives. The majority of the students declare that they use chatbot always, while other learners tend to adopt sometimes AI chatbots (15.8%), also 15.8% of them say that they rely on them occasionally and others tend to use them often (15.8%). At this particular point, no one denied their usage of AI chatbots since no student voted for never.

Question 15: Do you prefer relying on your own intelligence to complete assignments than using AI chatbots?

- A. Never B. Rarely C. Occasionally D. Frequently E. Always

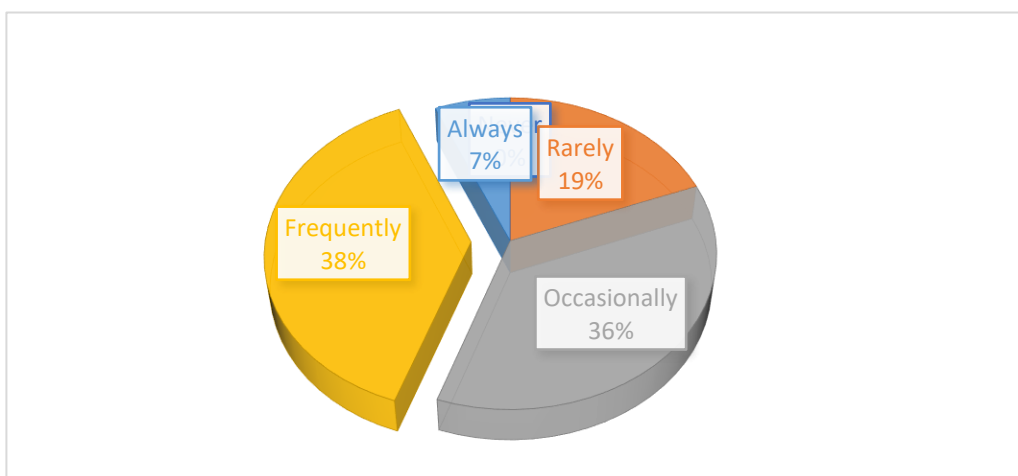


Figure 20 Students Tendency in Using Their Abilities

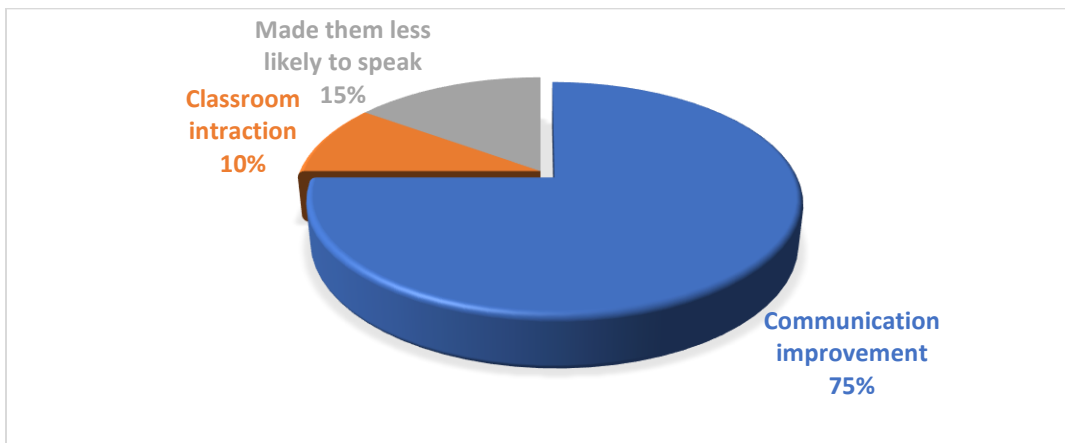


Figure 21: The AI chatbot's Impact on Students' Classroom Interaction

According to a recent study on the impact of AI chatbots on classroom interaction, 75% of students report improved communication skills through human-like conversation exercises. However, 15% of participants claim that the chatbots hurt their classroom performance by reducing their participation. The remaining 10% did not notice any changes in their behavior.

Question 18: How have AI chatbots influenced your linguistic and communicative abilities from a student's perspective? By:

- A. Maintaining human-like conversations.
- B. Expanding vocabulary knowledge.
- C. Providing you with new information and exploring diverse cultures.
- D. It does not affect my skills.

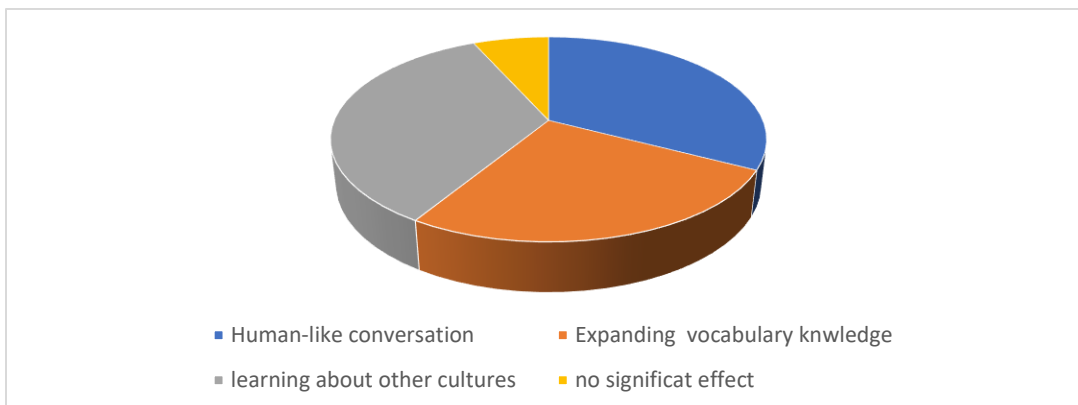


Figure 22 The AI Chatbot's Influence

It is essential to explore which techniques the students adopt in their AI chats that have a huge influence on their linguistic and communicative abilities, the results have revealed that 34.8% of participants said that AI chatbots provide them with new information, 32.5% manipulate the AI chatbots to practice human-like conversations, while 26.1% from the target population declared that it expands their vocabulary knowledge a finally 6.5% argued that it does not affect their skills.

Question 19 As technology continues to advance, Is it possible to neglect the need for real teachers and physical attendance to master communication skills and enhance cultural awareness?

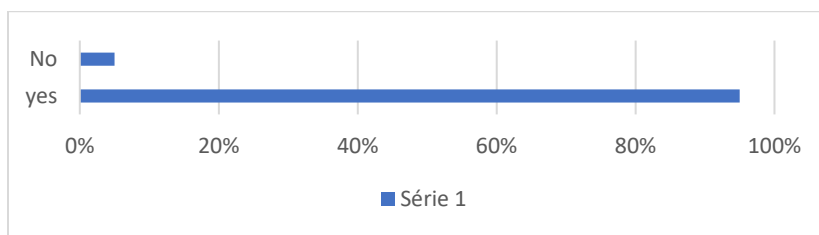


Figure 23: Students' Reaction to Traditional Instruction Neglecting

According to a survey conducted with language and communication students, many believe that AI chatbots cannot replace teachers due to their lack of human capacities such as feelings and creativity. Additionally, students feel that social interaction with teachers is more effective for improving communication skills. Some participants believe that with advancements in technology, AI chatbots could assist teachers or minimize their role, but others see this hypothesis as a risky prediction.

Question 20: Would you support replacing teachers with AI technology, particularly AI chatbots? Why or why not?

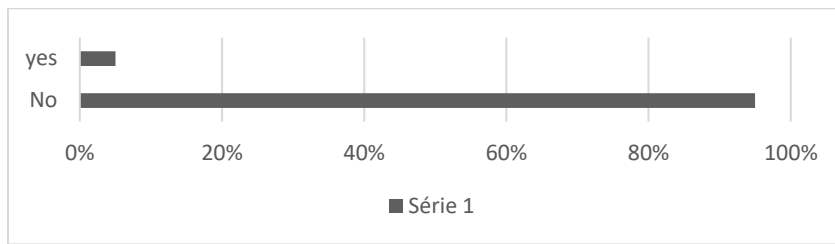


Figure 24: Students' Perception of AI Chatbot Dominance

According to students, teachers are essential to their learning process and cannot be replaced by AI chatbots. They argue that AI lacks emotional and social intelligence and that human interaction is necessary for exchanging ideas and clarifying misunderstandings. Additionally, students value physical attendance, connection, and guidance from teachers, which AI chatbots cannot provide. Some students believe that AI tools created by humans can never surpass our abilities.

3.2.2 Interpretation of the Questionnaire

Based on the previously mentioned information, the survey of this study focuses on mastering one or two languages and communication. The majority of students surveyed are between the ages of 18 and 25 years old. Nonetheless, a significant 11.1% of students who are 26 years of age or older are also included in the sample, indicating that the study contains a variation of age groups.

The survey is specifically designed to evaluate students' intercultural knowledge, cognitive abilities, and their relationship with AI chatbots. It also aims to explore how students use AI chatbots to enhance their intercultural skills in the target language. Most students are aware of the value of ICC in language acquisition; in fact, a significant portion (45.9%) think it's "pretty important." In addition, an important percentage (43.2%) believes that ICC is essential and enhances language learning, demonstrating its perceived importance in language learning. Students perceive several benefits with ICC, such as enhanced communication effectiveness (32.4%), greater motivation for language learning (24.3%), and higher confidence (43.2%). The findings indicate that, as assessed by the students, there is a positive relationship between ICC and language proficiency. According to their answer, ICC has a huge impact on students' language learning mainly in boosting their confidence and encouraging effective communication. The views of students on their language program vary from average (41.7%) to

excellent (11.1%). A few students expressed their disapproval, which points out that the curriculum has to be changed to improve multicultural understanding.

In addition, an important question is distributed among students regarding whether receiving information based on each student's cognitive ability would provide them with personalized learning. A significant number of them confirmed that this method should be highly emphasized in the learning process. Students' selections for learning techniques are varied, yet a significant number of them prefer active learning (27%) and artificial intelligence-based learning (37.8%).

This demonstrates an openness of the students toward new methods, based on the results students tend to use multiple learning techniques mainly based learning besides active learning and simulating scenarios inquiry-based learning, and different learning techniques The most common strategy to solve problems is logical reasoning and analysis (45.9%), which is followed by learning and study (18.9%) and creativity and brainstorming (16.2%).

This implies students are using their cognitive abilities in a balanced manner. It is very important to mention that language and communication students tend to use multiple types of intelligence. Students perform in varied roles in group settings, with a clear preference for collaborative cooperation (10.8%) and leadership positions (51.3%). It also reveals that students have a level of adaptation and social intelligence among the study's participant group. A large percentage of students (79.5%) acknowledge the importance of emotional and social intelligence in effective communication, highlighting the significant role of intrapersonal and interpersonal intelligence in intercultural knowledge development among students. Although students use AI chatbots sometimes, there is not a definite objection against their usage, as reported by 31.6% of students who contact them regularly or frequently. This shows that AI technology is becoming officially a significant part of the learner's language learning path, from completing their assignments to generating real-life conversations and providing them with an illimited amount of information. AI chatbots are seen more positively by students as assists in language learning, especially when it

comes to enhancing communication abilities (75%) and finding new information (34.8%), a minority does. However, this raises concerns about their possible negative consequences (15%). The theory that AI technology can replace human teachers is rejected by the majority of students (88.5%), who prioritize the need for human connection, emotional intelligence, and individualized coaching in language learning. In this particular part, students show a critical view and impressive analysis of the questions, Most of them are analytical in their answers and provide accurate evidence.

3.2.3 The Interview Analysis and Interpretation

After the interviewing process, it appears that all the teachers are encountering common challenges in developing and teaching students intercultural knowledge. Based on their evidence, there is a serious issue in accepting other cultures as students are still attached to their beliefs. Teacher number one mentions, "They are still attached to their culture. The other thing is that they don't go abroad." Meanwhile, teacher number two asserts, "The primary challenge in teaching ICC is having students who are unable to distinguish between different values of different cultures... ICC is something practical, but we find ourselves teaching something theoretical." In addition, teachers number 3 and 4 argue that there is a lack of openness and limited exposure to other cultures, stating, "There is a misconception of tolerance and accepting diversity." Moreover, All the teachers agreed that the age gap between the two generations of students and teachers will certainly impact both teachers' and students' views on the use of AI chatbots. Additionally, they strongly believe that the current generation tends to have more knowledge and awareness about AI chatbots and technological tools. One teacher stated, "We are apprehensive about this age gap, but I believe that this issue will be resolved." Teacher 3 adds, "Teachers should walk in students' shoes; they should understand their learners' needs and perspectives regarding ICC and technology."

Educators express a critical viewpoint as they explain and propose various ideas and implementations in the current program. teachers 4 suggest the integration of technological tools, AI apps, and digital devices. Teacher 1, drawing from her experience in e-learning, recommends introducing students to the virtual world "Bloom Space" and providing them with videos for

effectiveness. Teacher 2 adds that having the opportunity to travel abroad and experience cultural exchanges could significantly enhance their ICC. Lastly, according to teacher 3, students should be provided with more engaging and relevant topics.

All teachers believe that Generation Z tends to exhibit greater cultural awareness. From their perspective, technology plays a significant role in helping them access an unlimited amount of information. Furthermore, social media aids them in exploring new connections and cultures from around the world. This increased cultural exposure can be observed in their appearance and behaviors. Moving to the next question, teachers have differing views. While they all concur that AI chatbots can aid students in developing ICC, some teachers emphasize the importance of using them cleverly and smartly. On the other hand, other teachers insist on providing student guidance, suggesting that the chatbots should be supervised by the teacher to prevent them from getting out of control.

The teachers strongly support the idea of using AI chatbots to enhance students' abilities. According to the teachers, the key to benefiting from AI chatbots is through critical thinking and curiosity. However, they emphasize that this strategy should only be used to assist students, as relying solely on them may lead to negative effects. According to the interviewees, there is no single dominant intelligence among students; rather, they tend to use multiple intelligences depending on the situations, their profiles, or the needs of the module. However, some teachers have observed that master's students in language and communication are generally more socially and emotionally intelligent. On the other hand, one teacher argued that regardless of their intelligence, students tend to use AI chatbot applications most of the time.

The next question is asked to gather their thoughts on the overall concept of AI chatbots and the potential benefits they could provide. All participants agree that AI chatbots, when guided by human intelligence, have the potential to make a positive impact on students. One teacher notes, "It depends on the individual needs of the students. Our responsibility as teachers is to cater to their interests." Students today are increasingly drawn to technology, particularly AI chatbots".

The majority of teachers reveal that they are against the overreliance on AI chatbots. From their perspective, students should be educated on the use of AI tools, as this can lead to a decrease in their academic performance. Teacher 1 comments, "It's essential for teachers to raise awareness about the use of these technological tools." Other teachers add that we should control our use of technology to prevent it from taking over human thought. Technology should be seen as a tool designed to assist students in enhancing their intelligence, rather than replacing human abilities

Since they cannot control their usage of AI chatbots, teachers explain that guiding them instead of punishing them would be highly effective. All teachers agree that students should be provided with knowledge about the usage of AI chatbots. Teacher 2 suggests that we should encourage students to learn and read more to protect themselves and become more aware. Teacher 3 asserts, "I think it's about learning theory. Instead of focusing on connectivism, we should focus on humanism because human experience is unique." By exposing them to other materials such as YouTube channels, and apps still, AI can be used to help them extend their cultural awareness. Since this study addresses a new method related to students' ICC learning, it is essential to ask the interviewees whether this method can provide personalized learning. Teachers do not deny that the idea can offer personalized learning. However, one of the teachers argues that it depends on the way they use AI chatbots. The way students ask questions and receive answers would give them a certain level of person As expected, all teachers have expressed antipathy toward the idea of AI chatbots replacing humans. They stated that AI chatbots should be seen as a tool to assist instructors and students in the learning process, even though they are a useful technology with the potential to raise students' ICC levels. The majority of teachers expressed how unique human experience and potential are. A significant note was raised by a teacher: while AI chatbots might not have social and emotional intelligence yet, intelligent robots and AI chatbots might eventually gain these abilities, even if they wouldn't be as natural as human-to-human communication.

In short EFL master teachers assert that students do have ICC awareness but they still lack the true experience such as; cultural exchange. Regarding the student's intelligences, their classes tend to encompass multiple intelligences, which makes personalized ICC learning even more complex.

However, they view this new blended learning method as the key or solution for these cases; yet, They emphasize their role in guiding students' AI use considering it as two-sided weapon that can be harmful if it is overused. Despite their perception of AI they completely reject the idea of its domination in the educational field especially in teaching.

In conclusion, this survey works as a total examination of their intercultural skills, cognitive abilities, and their AI chatbot use. In the first section, students demonstrate a great awareness of the importance of ICC learning, with the lack of true cultural experiences. Additionally, in the second part, students show a smart manipulation of their intelligences while communicating and adaption to various learning methods, including; AI-based learning. Lastly, based on the survey, there is a noticeable overreliance on AI chatbots by students; However, while asking them whether they think that AI can replace their teachers. they completely reject the idea, claiming that robots can never have social and emotional intelligence.

3.2.4 Classroom Observation:

This direct observation of students in the classroom provides insight into their multicultural awareness as well as their classroom interactions. we select oral expression and E-learning sessions to be the center of our observation. During the lectures, students are supposed to act spontaneously. The observational process is conducted using a well-structured observational checklist. At the end of the M1 Language and communication sessions, we were able to gather an overview of the student's communicative abilities and their dominant intelligence by examining the following objectives: student's language proficiency, verbal/nonverbal communication, intercultural skills, students abilities(intelligence) and teachers impact on students

In a recent oral expression session, M1 language and communication students display their abilities in intercultural and effective communication skills. They present with excellent accents, and creative role plays, and use body language effectively. Additionally, they exhibit emotional and social intelligence, logical thinking, and problem-solving skills. Additionally, They adeptly manipulate their

body language and facial expressions during communication, interact well, exchange ideas, engage in discussions, and collaborate effectively in group work. Moreover, they demonstrate logical and reasoned thinking in problem-solving and completing tasks. These students demonstrate advanced proficiency in the target language without relying on pre-prepared presentations. In this particular session, students demonstrate more social and emotional intelligence, besides mastering intercultural communication.

During an e-learning session, students define culture as encompassing various aspects such as language, religion, art, history, food, people, ideas, and education. The teacher plays a critical role in encouraging the students to provide more information, which leads to high levels of critical and logical thinking during discussions. The session also explores the impact of technology on culture, including the role of AI chatbots in shaping cultural awareness and the changing nature of beliefs in the digital world. The teacher effectively communicates topics such as virtual experiences, cyberspace, and different cultures found in various applications. The session aims at enhancing cultural awareness and understanding of how technology influences cultural beliefs and perceptions. Overall, this session provides valuable insights into the students' communication intelligences and their perspectives on culture and technology. Unlike the first session, this time students show more logical intelligence and critical thinking

Lastly, this classroom observation functions as a complementary element, through which all the previously gathered data are tested. According to our observational outcomes, students tend to have great intercultural communicative performance, body language skills, and linguistic abilities. Impressively they show incredible capacity in adapting their intelligences based on classroom needs.

3.2.5 Discussion of the Final Results

According to the student's questionnaire, the learners demonstrate a certain level of intercultural awareness and recognize its significance in language learning and openness towards other cultures. However, most students rate the syllabus as average, which is an important point to note. Despite their awareness of the need for intercultural knowledge, they express dissatisfaction with their program. Additionally, they show a willingness to use different techniques and methods to approach information,

highlighting their readiness for learning. They also emphasize the importance of both social intelligence (SI) and emotional intelligence (EI) in language learning and the enhancement of intercultural communicative competence (ICC). It is worth noting that the majority of students use AI chatbots, recognizing their importance but also acknowledging their limitations in emotional and social intelligence. All students are against the idea of replacing teachers with AI chatbots, providing strong arguments to support their stance.

According to the teachers, the current generation shows more cultural acceptance due to technology and social media. However, with the emergence of AI tools, students have started using them in a way that affects their intelligence and abilities. Each teacher shares his opinion and educational experience on the topic. They acknowledge that students have unlimited abilities and flexibility in using intelligence to communicate effectively. While there is no single dominant intelligence in the class, some students excel in specific intelligence such as EI. The teachers emphasized the need to raise awareness about the correct use of AI chatbots, stating that they can only be effective with proper guidance from teachers. This highlights why AI chatbots can never replace human intelligence or the role of teachers.

The observation reveals that students demonstrate intercultural skills and communicative competence during the oral expression session, showcasing social intelligence and emotional intelligence through their body language and teamwork. Conversely, in the e-learning session, they predominantly displayed logical intelligence. This suggests that students of master a language and communication obtain the flexibility and capacity to adapt their intelligence to match the learning objectives

3.3 Suggestions and Recommendations

The study suggests a new blended learning method to teach ICC, this approach is divided into classroom and home (virtual) learning processes. During classroom interaction teacher will emphasize student intelligence while at home part AI will work as an assistant to complete tasks and practice intercultural communication.

1) **Investigation into Learners' Cognitive Abilities:**

This involves conducting assessments and surveys to understand the cognitive strengths and preferences of individual learners. By identifying whether a student leans towards visual, auditory, kinesthetic, or other learning styles, educators can tailor instructional strategies to better suit their needs.

A. Empowering the Relationship between Language Learning and Culture:

Integrating cultural components into language learning curriculum fosters a deeper understanding and appreciation of both language and culture. Activities such as exploring cultural traditions, analyzing literature from different cultures, and engaging with native speakers facilitate a holistic language learning experience.

B. Raising Awareness Activities: These activities aim to increase students' understanding of the importance of ICC in language learning. This may involve discussions, presentations, or interactive workshops on the role of AI in education, its significant contribution to language learning, and ethical considerations surrounding its use.

C. Raising Sensations towards the Use of AI Chatbots: Through teachers' experiences and explanations of the importance of AI correct use, students can develop a sense of awareness and healthy relationship with AI chatbots. Teachers can show the capabilities of chatbots, provide opportunities for students to interact with them, and address any concerns or misconceptions that may arise. teachers must guide the students' use of AI chatbots and show them how to use them correctly. considering that it's not about the AI chatbot concept but it is about the way you interact with it

➤ **Teaching the main AI skills:** students should also learn the main AI skills that enable them to effectively interact with AI chatbots and manipulate their algorithm in order to get the best from it. These strategies include:

- NLP stands for Natural Language Processing. IT IS a subdomain of artificial intelligence (AI) that allows computers to comprehend, interpret, and generate human

language in a natural and meaningful way. NLP strategies are applied in many systems such as machine translation, sentiment analysis, chatbots, text summarization, and more. It's a mysterious technique that combines both human language and machine understanding

- Prompt engineering involves providing accurate prompts or questions for language models such as GPT 4 in order to gain the best of AI systems. It focuses on designing the detailed text in a way that controls the tool to provide the user with the most suitable response or output. This process also covers understanding the abilities and limitations of AI tools (CHATBOTS) and designing the prompts to achieve any specific task.

Communication Skills: Being able to communicate effectively with AI experts, policymakers, and the general public about AI-related topics is important for fostering understanding and collaboration.

2) **Multiple Intelligence Theory Application in The Classroom:** Teachers can integrate activities and assignments that cater to different bits of intelligence identified in Howard Gardner's theory. For example, incorporating visual aids for spatial learners, musical elements for auditory learners, or hands-on projects for kinesthetic learners ensures a diverse and inclusive learning environment.

A) **Step1:Identification of classroom intelligence profile:** The teacher will adopt a specific method in order to identify his/her student's predominant intelligence

B) **Step 2: Analyzing Learning Strategies across Multiple Intelligences:** the educator should know how each type of them tends to learn to design well-constructed lesson plans that suit the student's intelligence

- C) **Step 3: Designing activities suitable to their intelligence:** at this stage teacher invests in their intelligence to build ICC knowledge and linguistic abilities, using activities and strategies such as role plays, storytelling, movies, critical discussions, games, memorization, music, and body language.
- D) **Step 4: preparing lesson outline:** after identifying the student's cognitive abilities and the selection of activities that match them, the teacher will be ready to plan an outline to achieve the learning goal which is enhancing the student's ICC.

Type of intelligence	Description
Linguistic intelligence	Talented in using words efficiently; in writing or verbal
Musical intelligence	Talented in recognizing and composing musical pitches, tones and rhythms
Logical-mathematical intelligence	Talented in reasoning deductively; think logically and problem solving
Spatial intelligence	Talented in identifying and visualizing shape, space, colour and lines including representing ideas visually and graphically, creative, highly imaginative
Bodily-kinaesthetic intelligence	Talented in carrying out physical activities, controlling own body movements and hands involving the fine and gross motor skills
Interpersonal intelligence	Talented in the communication with others in terms of understanding their intentions, motivations and desires
Intrapersonal intelligence	Talented to be self-aware, to understand and appreciate own feeling
Naturalistic intelligence	Talented in recognizing plants, animals and nature
Existential intelligence	Talented in understanding the existence of human and life

Table 2 Table 2: Identification of Different Intelligence Profiles (Bahtiar et al., 2015)

- 3) **Teachers' Role and Multiple Intelligences Management:** Teachers play a crucial role in identifying and manipulating students' different intelligences. They can design lessons that can target various intelligence profiles, provide personalized learning for every student, and facilitate student learning experience by also enhancing intercultural competence

a) Intrapersonal and Interpersonal Boosting Techniques: Social and emotional intelligence is vital in elevating students' ICC, they are the main intelligences that enable humans to communicate effectively. Therefore, fostering self-reflection, confidence, and self-regulation in language learning empowers intrapersonal abilities, while focusing on the significance of collaboration, communication, and teamwork to enhance interpersonal skills. Teachers can structure activities that focus on both EI and SI, listed as follows;

b) Groupwork and Role-plays: teamwork is one of the best ways to generate linguistically and culturally rich activities such as group discussions, collaboration, debates, and role-plays that lead to fluency in the target language, cultural awareness, and competencies of interaction with other people. This type of strategy is highly recommended since it empowers students' strengths and interests and encourages active participation and engagement.

c) Gamification of Learning: Integrating game elements into language learning activities makes the process more interactive and enjoyable. This can change the learning concept to be more fun. Teachers can design language games, quizzes, and simulations that elevate vocabulary, grammar, and cultural background by motivating students to actively participate and compete.

d) Body Language Awareness: through the cultivation of the ability to read, assess, and express non-verbal cues, students can develop such skills to analyze, decode meaning, and communicate successfully. Educators can use games and exercises to do discussions and activities that require students to express themselves through body language, gestures, and facial expressions to enhance their intercultural communication.

e) Linguistic and Logical Thinking Enhancement: reinforcing these mental self-rescuing activities helps students to cope with language and logical intelligence. promoting the students' apprenticing through activities comprising discussion of texts, problem-solving, and debate of

some current issues to grow not only logical linguistic skills but also cultural knowledge.

f)Emphasizing the Four Main Skills: Convening instruction input in equal degree on the four language skills—listening, speaking, reading, and writing brings about comprehensive schooling and teaching. Teachers could allow students to apply concepts in every skill zone, modifying activities in order to meet the level of skills of each student and their learning style.

g)Discussions and Critical Exercises: The students can engage in critical discussions and open-minded exercises., which can increase students' confidence in stating their viewpoints, assessing situations, analyzing the information, and interacting with people from different cultural backgrounds. Encourage the use of open-ended questions, debates, and reflective writing styles in the target culture and language in order to boost the level of language development. The use of these techniques will help to increase the level of Language development. The integration of these activities is significant for students exercising their logical thinking abilities in not only one but two cultures at the same time.

h)Offering Personalized Learning Concept: Tailoring learning to each learner's specific needs and options in the way they learn gives them the ability to make decisions, to have a drive behind what they do and at the same time achieve success. Employ technology, adaptive online learning programs, and diverse teaching methodologies to ensure students of various intellectual and interest capacities will have individualized education experiences.

4)AI Chatbot Assistance Strategies Outside The Classroom

AI chatbots assisted with language learning will offer individualized, and prompt assistance and evaluation for trainees. Implement intelligent chatbots with self-adaptive algorithms, adjusting words and pace speed according to students' progress, as well as offering personalized language exercises and solutions for the common language terms.

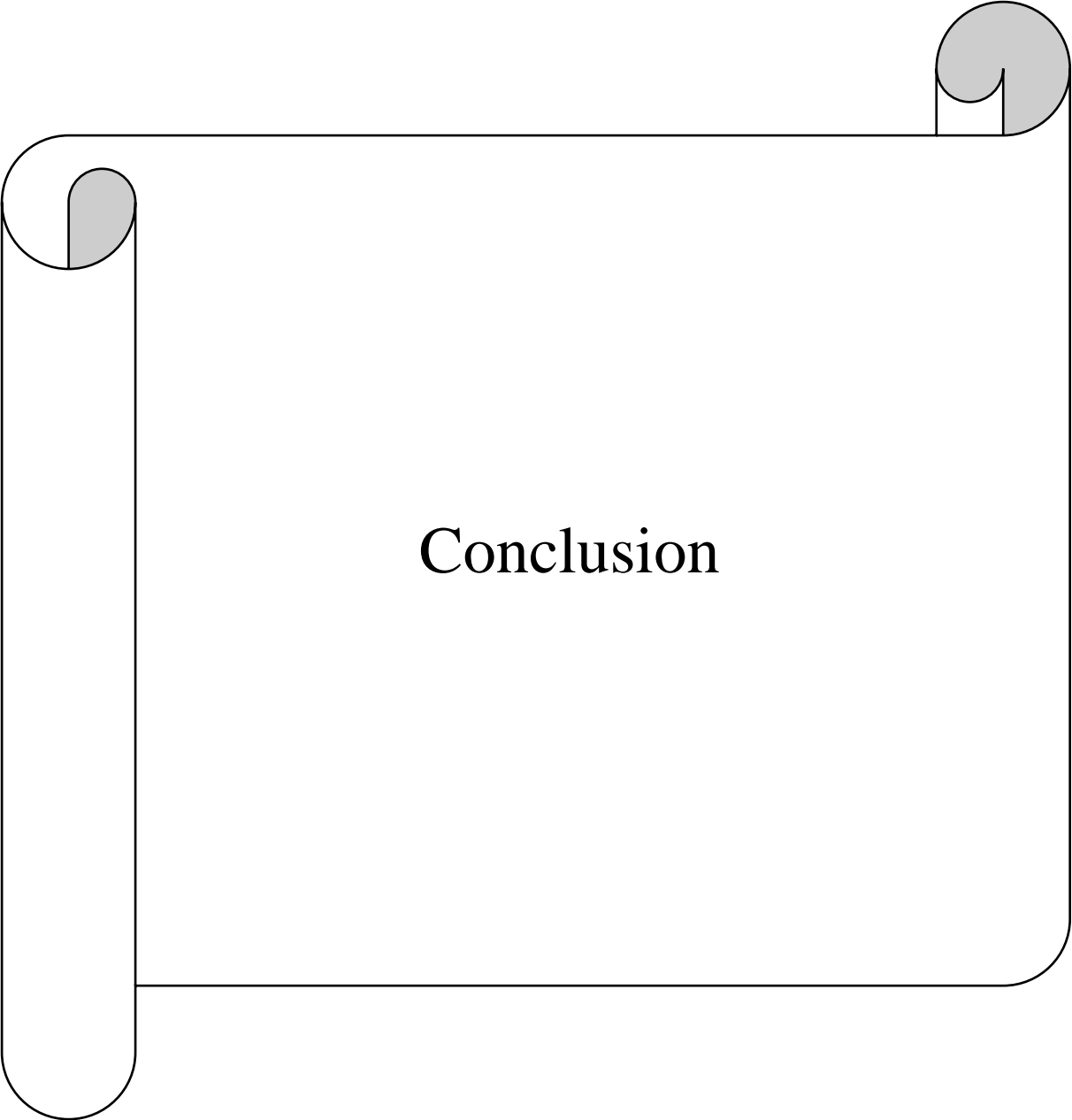
- A. **AI Chatbot Algorithm Adaptation to Multiculturalism NLP:** programming AI chatbot algorithms to recognize and respond appropriately to cultural terms enhances their effectiveness in the intercultural learning process. Incorporating cultural references, greetings, and communication styles into chatbot interactions to promote cultural sensitivity and understanding, has a huge impact in educating students about other cultures.
- B. **Adjusting the Chatbots System to Different User's Intelligences:** this function allows AI chatbots to provide users with specific high-quality information. Through developing its NLP system AI chatbots will be able to analyze the human natural language, making it easier to recognize different intelligences profiles and give users more specific and personalized answers.
- C. **Human-like Conversations Design:** Designing AI chatbots capable of engaging in natural, human-like conversations fosters authentic language practice and communication skills development. Implementing speech recognition, natural language processing, and conversational AI technologies to create immersive and interactive chatbot experiences for students. This may also include virtual video meetings and vocal interaction with AI chatbots. That kind of interaction with AI chatbots provides the students with human-like conversation practice through which the user feels more comfortable.
- D. **Generating Activities:** AI Chatbots could be also a great tool for generating communicative activities and language learning. This facilitates the personalized learning process making it less dependent on teachers. Students can easily test their communication and intercultural skills through AI chatbot tasks such as quizzes and many other activities.

These strategies enable educators to use chatbots to support quality language learning, develop intercultural communication, and boost students' cognitive and language skills.

3.4 Conclusion

In conclusion, this final chapter presents an in-depth analysis of the data collected. The chapter starts with the student survey to reveal and reflect upon the student perception of Intercultural

Competence capacity and its potentialities through AI chatbots and intelligence. The interview, likewise, is highly vital in the analysis of our study since it availed teachers' remarkable and impressive insights on the study focus. To conclude, the final chapter focuses on classroom observations to enhance our study perception and understanding of the interactions. In conclusion, it is important to mention that intercultural awareness should be taught alongside language learning. This new blended learning method, which combines the use of AI chatbots and human intelligence, offers more personalized learning of ICC. Through this approach, the quality of learning can be significantly enhanced.



Conclusion

General Conclusion

The study highlights the impact of elevating students' intercultural communicative competence by merging the use of AI chatbots and multiple intelligences theory. Our research focuses on creating an effective methodology through which students receive personalized ICC education by learning through their own type of intelligence and get assisted by AI chatbots.

The multiple intelligences theory is a well-known psychological principle that significantly changed our perception of the human brain's capacity and its function. It has raised awareness of the brain's ability to analyze and absorb information. On the other hand, AI chatbots are highly advanced technologies that allow users to access information and perform tasks more easily. However, AI tools can never fully replicate the natural human intelligence, they can only function as assistants besides human intelligence, mainly in language learning. The study explores the possibility of integrating these two significant elements to develop students' ICC. It also emphasizes the importance of teaching culture besides language learning.

This research explores the possibility of integration of AI chatbots and MI (Multiple intelligences) to enhance students' cultural knowledge. While AI is a powerful tool with access to a vast network of data and information from various fields, it also carries certain risks. The robotic nature of AI chatbots raises concerns about their ability to fulfill the true purpose of learning. However, by incorporating MI theory in the classroom, training the learners with a real conversation based on each student's abilities, and using a chatbot to boost their ICC, we can strive for a more comprehensive and meaningful approach to cultural knowledge development. This specific approach will make them master the effective communication. This study also focuses on developing AI chatbot algorithms, allowing them to be smart enough to analyze the user's intelligence and intercultural skills based on their human text or questions. Through working on the natural language processing of these AI tools and providing the users with a suitable response.

The research is divided into three chapters. The first chapter delves into the theoretical background and the conception of intercultural awareness, its connection to language learning, and the integration

of multiple intelligence theories and advanced technology, especially artificial intelligence chatbots. In the second chapter, the focus shifts to the selection of data collection tools and the methodology employed. This section identified the precise methods adopted for data gathering and outlined the data analysis procedures are undertaken. This specific study adopts a mixed method through which students survey, teachers interview and classroom observation are included to serve the aim of the research. For this data collection process, we chose the master one and two language and communication students and EFL master teachers. The chapter concludes with a determination of data analysis procedures. Chapter Three presents the outcomes of the study, wherein concrete results are analyzed and extensively discussed. Each data-gathering tool was interpreted and analyzed individually, leading to a thorough examination of the findings. Lastly, the final results led us to a set of recommendations and implications, in which a new method is suggested.

This study is conducted to examine the possibility of integrating two different aspects of intelligence into the language learning process. During the study, we aim to design a unique and effective method that enables EFL learners to develop their cultural awareness and acceptance. This fusion of AI technology (chatbots) and learners' specific types of intelligence can offer high-quality learning. Since chatbots can assist students in practicing human-like conversations and virtual video calls can provide opportunities for unsociable learners to practice communication and build self-confidence, teachers and classroom interaction remain indispensable. Therefore, teachers are tasked with imparting ICC knowledge based on learners' intelligence profiles and encouraging them to use AI chatbots judiciously.

The final results prove that students in the master's of language and communication show impressive intercultural skills. The observation also reveals that students can adapt their intelligence to session needs and display emotional and social intelligence. The survey confirms that students recognize the importance of intercultural learning and are open to different learning methodologies based on their intelligence. In terms of using AI chatbots, students are against the idea of teachers being replaced by AI chatbots, emphasizing the importance of human social and emotional intelligence. Teachers in the

interview expressed support for integrating AI chatbots into education but believe teachers must guide students in utilizing AI chatbots to enhance learning quality and intercultural communication skills.

The research suggests significant implications, mainly a new blended learning method wherein students' multiple intelligences will be extensively emphasized in the classroom. This approach involves integrating various activities that develop intercultural communication based on students' cognitive abilities, especially emotional and social intelligence. For instance, role-plays enhance logical thinking, mastery of body language, practice of social interaction skills, and gamification of learning. Additionally, students can practice and enrich their cultural awareness at home using AI chatbots in various ways, including engaging in human-like conversations and virtual communicative experiences, as well as completing suitable tasks. However, it's essential for teachers to guide students in their use of AI chatbots. This method aims to elevate not only students' ICC but also the quality of language learning

The study focuses on enhancing language learning by integrating AI to boost learners' intercultural communicative competence and communication skills. While AI can improve communication, it cannot surpass human abilities. It is noteworthy that this study asserts that AI can function only as an assistant to the human brain. Since this advanced technology is a two-sided weapon, we should carefully guide our student's AI chatbot use. This research extends beyond education to psychology, sociology, and computer science, inspiring programmers to develop AI chatbot algorithms, allowing them to be more humanized and adapted to different intelligence and cultural profiles.

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Appendices

Appendix- The Students Questionnaire

Dear Student, You are kindly invited to cooperate by responding to my questionnaire. It is estimated that it will require approximately 5 to 7 minutes to complete this questionnaire. The information provided by your cooperation will help me in collecting data for my research

Your cooperation in completing this questionnaire is greatly appreciated, thank you in advance.

I)Biographical Section

1-Which age range do you belong to?

1- 21-25

2- 26 – 30

3- More than 30

II)Intercultural communicative skills

2-As an EFL student, how do you see intercultural communication?

1-Totally necessary - it brings the language to life!

2-Pretty important - helps avoid misunderstandings.

3-Meh, not that crucial, focus on grammar and vocab.

3-How can intercultural learning affect your language learning ?:

Motivating me to learn English more deeply.

Encouraging me to communicate more effectively in English.

Increasing my confidence in using English with diverse speakers.

4-How often do you find yourself interacting and communicating with other cultures?

Never Rarely Occasionally Frequently Always

5 Do you face difficulties in expressing yourself orally in English?

Never Rarely Occasionally Frequently Always

6-What is your favorite strategy to enhance your cultural awareness?

1 -Interact with foreign people using your abilities

2-Using AI chatbot assistance

3-To learn about other cultures

7-How would you rate the level of cultural awareness integration within your English as a Foreign Language (EFL) program?

Excellent Good Average Poor

III) Students abilities

8-Do you believe that tailoring instruction to each student's cognitive strengths(multiple intelligence theory) would enhance personalized learning?

9-As an advanced Anglophone, which skill do you excel in the most?

Oral written listening reading

10 -How do you typically approach new information?

1. Simulating scenarios

2. Artificial Intelligence-based Learning

3. Active Learning

4. Learning Strategies

5. Inquiry-based Learning

11-how do you prefer to solve problems?

1. Logical reasoning and analysis

2. Creativity and brainstorming

3. Collaboration and teamwork

4. Research and learning

5. Intuition and gut feeling

12 -when you work in a group which role do you naturally prefer?

1. The leader

2. The manager

3. The wisest

4. You prefer to rely on other members

13-Do you believe that emotional and social intelligence are the two main bits of intelligence that we need the most in any communicative situation, especially with other cultures

a) Yes, absolutely. b) Yes, to a certain extent. c) Somehow. d) Not at all

14- Which intelligence(SI or EI) do you use the most when you are communicating or generating ideas to participate in any conversation In or outside the classroom?

IV) The Use of AI chatbots:

15-Do you prefer relying on your intelligence to complete assignments rather than using AI chatbots?

Never Rarely Occasionally Frequently Always

16-How often do you use AI chatbots?

Never Rarely Occasionally Frequently Always

16-how do AI chatbots impact your class interaction?

- It has helped me improve my communication skills by practicing with the chatbot
- I haven't noticed a significant impact on my class interaction
- It has made me less likely to speak up in class

17-Do you believe that AI serves as simply an assistant alongside our human intelligence? Justify

18-How have AI chatbots influenced your linguistic and communicative abilities from a student's perspective? by:

1. Maintaining human-like conversations.
2. Expanding vocabulary knowledge.
3. Providing you with new information and exploring diverse cultures.
4. It does not affect my skills

19-As technology continues to advance, Is it possible to neglect the need for real teachers and physical attendance in order to master communication skills and enhance cultural awareness?

20- Would you support replacing teachers with AI technology, particularly AI chatbots? Why or why not?

Thank you for your collaboration

Appendix_ The Teachers interview

Dear teacher, You are kindly requested to respond to the following questions that highlight the impact of the Integration of AI chatbots besides multiple intelligence on EFL student intercultural awareness

1-As a teacher of university master's students, what are the primary challenges you may face in fostering students' cultural awareness?

2-Do you believe that the age gap between teachers and students, from different generations, will impact both your perception and their perception regarding the integration of AI in the learning system?

3-Are there any modifications you would recommend in your syllabus to bolster cultural awareness within the context of English as a Foreign Language (EFL) instruction?

4-Do you believe that Generation Z tends to have greater cultural awareness and acceptance of diversity towards other cultures?

5-Do you believe that artificial intelligence, especially AI chatbots, can greatly assist students in developing not only their cultural communicative competence but also their language and cognitive skills? Justify?

6-What are your thoughts on using AI chatbots to augment human intelligence and enhance cultural awareness?

7-From a teacher's perspective, which type of intelligence is the most dominant in your class?

8-What are your thoughts on the overreliance on AI chatbots among EFL students, and how does it impact them?

9-Since you cannot control their usage of AI chatbots, how can you influence the use of this invention and demonstrate how it can be utilized effectively to expand their cultural knowledge?

10-Do you believe that incorporating artificial intelligence chatbots, guided by the principles of multiple intelligence theory, can provide advantages for students?

11 -Do you believe that utilizing AI chatbots and multiple intelligences to enhance students' intercultural awareness would provide personalized learning?"

13_ Do you predict that AI chatbots could ever be able to replace you as an EFL teacher?

Thank you for your collaboration

Appendix - The Observational Checklist

Skills	objectives	Yes	No	Comment
The language proficiency	<ul style="list-style-type: none"> ➤ Mastering the macro skills(Listening/Speaking/Writing Reading) ➤ •Grammar and vocabulary correctness 			
Non-verbal communication	<ul style="list-style-type: none"> ➤ The students use non-linguistic behavior and body language in communication 			
Intercultural skills	<ul style="list-style-type: none"> •Communication management through intelligence manipulation Native habit assimilation (cultural intelligence). •Student's cultural acceptance 			
Students abilities	<ul style="list-style-type: none"> ➤ Students collaboration(Social intelligence) ➤ Body answers and physical interaction(Knyntetic intelligence) 			

	<ul style="list-style-type: none"> ➤ Musical environment(Musical intelligence) ➤ The ability of classification and organization(Naturalistic intelligence) ➤ Reasoning thinking and problem-solving (Logical intelligence) ➤ Mastery of the body language (Emotional intelligence) <ul style="list-style-type: none"> ➤ Visual intelligence 			
Teachers impact	<ul style="list-style-type: none"> ➤ Teachers' ability to manage students' intelligences in ICC learning. ➤ Teacher's guides of students ai chatbots use 			
AI chatbot use	<ul style="list-style-type: none"> ➤ The impact of AI chatbots on student communication in the classroom. 			