**REPUBLIC OF TÜRKİYE**
**ÇANAKKALE ONSEKİZ MART UNIVERSITY**
**SCHOOL OF GRADUATE STUDIES**

**DEPARTMENT OF FOREIGN LANGUAGE EDUCATION**
**ENGLISH LANGUAGE TEACHING PROGRAMME**

# AN INVESTIGATION OF EFL LEARNERS' INTERCULTURAL COMMUNICATIVE COMPETENCE IN A BLENDED LEARNING ENVIRONMENT

**PhD DISSERTATION**

**EMRAH ÖZDEMİR**

**Supervisor**
**PROF. DR. DİNÇAY KÖKSAL**

**ÇANAKKALE – 2023**

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**SCHOOL OF GRADUATE STUDIES**

The study titled "**An Investigation of EFL Learners' Intercultural Communicative Competence in a Blended Learning Environment**" prepared by Emrah ÖZDEMİR under the supervision of Prof. Dr. Dinçay KÖKSAL, and presented in front of the following committee on 31.01.2023, was unanimously accepted as a thesis for the degree of **DOCTOR OF PHILOSOPHY** in **Department of Foreign Language Education**, Çanakkale Onsekiz Mart University, School of Graduate Studies.

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## ETİK BEYAN

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Emrah ÖZDEMİR
27/02/2023

## ACKNOWLEDGEMENTS

*"Even if you paint for a million years, your masterpiece will always be your next painting. Each time you will see something in your picture that you want to improve. Some of the letters I have received say something like: "I made a painting but I was not satisfied with the result…" This is a wonderful thing. Because it makes people want to start the next painting. You will understand what is wrong… I hope you have these feelings from time to time throughout your life and eventually you will try to reach the best and improve yourself"* (Bob Ross, Painter)

.

The key to success is faith and hard work. People should believe that they can achieve the goal they have set. The way to be successful is through hard work and dedication. There is an absolute effort behind every success. No success is possible without effort.

I worked day and night while preparing this thesis. This work has emerged as a result of long efforts and struggles. It is the product of a planned and programmed study. While writing, I faced many difficulties. These difficulties emerged sometimes as a lack of motivation, sometimes as a pandemic, and sometimes as anxiety. However, in the end, it became possible to complete this study by working tirelessly.

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I dedicate this thesis to my father who passed away in 2014. I am sure you are proud of me.

> *"This is life, as you see, everything ends in an instant. This is life, the moment you say the last thing, everything comes to life again"* (Shams Tabrizi)

Emrah ÖZDEMİR

Çanakkale, 2023

# ÖZET

## HARMANLANMIŞ BIR ÖĞRENME ORTAMINDA İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRENEN ÖĞRENCİLERİN KÜLTÜRLERARASI İLETİŞİM YETERLİLİKLERİNİN İNCELENMESİ

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31/01/2023, 132

Dil öğretimindeki en önemli değişimlerden biri, kültürün temel bir unsur olarak kabul edilmesidir. Bu kapsamda, kültürlerarası iletişim yeterliklerini geliştirmek, yabancı dil öğretiminin ortak amacıdır. Öğrencilerin İngilizce dilini kullanarak kültürler arası iletişim kurma konusunda sınırlı fırsatları vardır. Bu endişeleri göz önünde bulunduran bu çalışmanın birkaç amacı vardır. İlk olarak, kültürlerarası öğretimin yabancı dil olarak İngilizce öğrenenlerin kültürlerarası iletişimsel yeterlilik düzeyleri üzerindeki etkilerini araştırmayı amaçladık. İkinci olarak, geleneksel ortamlar ile harmanlanmış ortamlar arasında bir fark olup olmadığını araştırmayı amaçladık. Üçüncüsü, yabancı dil olarak İngilizce öğrenenlerin teknolojik araçların kültürlerarası amaçlarla kullanımına ilişkin algılarına ışık tutmayı amaçladık. Ana çalışma, aşağıdaki aşamalardan oluşmaktadır. (1) Ana çalışmanın pilot uygulaması, (2) ön test olarak ICAN, ICAW ve ISS'nin uygulanması, (3) harmanlanmış kültürlerarası öğretimin uygulanması, (4) son test olarak ICAN, ICAW ve ISS'nin uygulanması ve (5) görüşmeler. İlk bulgu, dikkatle planlanmış sınıf içi kültürlerarası öğretimin, yabancı dil olarak İngilizce öğretmeni adaylarının kaygı düzeylerini düşürme açısından olumlu bir etkiye sahip olduğudur. İkinci bulgu, kültürlerarası öğretimin yabancı dil olarak İngilizce öğreten adaylarının kültürlerarası farkındalık düzeylerini olumlu yönde etkilediğidir. Üçüncü bulgu, kültürlerarası öğretimin İngilizce öğretmen adaylarının kültürlerarası duyarlılık düzeylerini olumlu yönde etkilemesidir. Son bulgu ise,

harmanlanmış etkinliklerin kültürlerarası amaçlarla kullanılmasına ilişkin algı ve görüşlerin genel olarak olumlu olduğu yönündedir.

**Anahtar Sözcükler**: Kültür, Kültürlerarası İletişim Yeterliliği, Harmanlanmış Öğrenme, BİT

## ABSTRACT

### AN INVESTIGATION OF EFL LEARNERS' INTERCULTURAL COMMUNICATIVE COMPETENCE IN A BLENDED LEARNING ENVIRONMENT



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One of the most significant shifts in language teaching is the acceptance of culture as an essential element. Within this scope, promoting intercultural communicative competence (ICC) has become a common objective of foreign language teaching. Learners have limited opportunities in terms of communicating interculturally using the English language. By bearing these concerns in mind, the study has several objectives. First, we aimed to investigate the effects of intercultural instruction on the intercultural communicative competence levels of EFL learners. Second, we aimed to explore whether there is a difference between traditional environments and blended environments. Third, we aimed to shed light on the perceptions of EFL learners regarding the use of technological tools for intercultural purposes. The main study consists of the following stages. (1) Piloting of the main study, (2) administration of ICAN, ICAW, and ISS as the pretest, (3) implementation of the blended intercultural instruction, (4) administration of ICAN, ICAW, and ISS as the posttest, and (5) conducting interviews. The first finding was that the carefully planned in-class intercultural instruction had a positive effect in terms of decreasing the anxiety levels of EFL learners. The second finding was that intercultural instruction positively affected the intercultural awareness levels of EFL learners. The third finding was that intercultural instruction positively affects the intercultural sensitivity levels of EFL

learners. The final finding was that the perceptions and opinions regarding the use of blended activities for intercultural purposes were generally positive.

**Keywords:** Culture, Intercultural Communicative Competence, Blended Learning, ICT

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## ABBREVIATIONS

| | |
|---|---|
| EFL | English as a Foreign Language |
| ELT | English Language Teaching |
| FLE | Foreign Language Exam |
| ICC | Intercultural Communicative Competence |
| ICANS | Intercultural Communicative Anxiety Scale |
| ICAWS | Intercultural Communicative Awareness Scale |
| ISS | Intercultural Sensitivity Scale |
| ICT | Information and Communications Technology |

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# CHAPTER I
# GENERAL INTRODUCTION

## 1.1. Introduction

This section provides the rationale behind this study. First, the background information is given. Second, the problem is discussed in detail. Third, the objectives of the study are presented. Fourth, the significance is stated. Fifth, the research questions are presented. Finally, the study finishes with the assumptions, limitations, and definitions of key terms.

## 1.2. Background of the Study

In the course of language teaching, a change of understanding has appeared lately (Thorne, 2010). One of the most important changes is the acceptance of culture as an essential element (Kramsch, 1995; Atay et al., 2009). Culture has come to the fore in foreign or second language teaching and the main discussions have focused on how to teach culture and whose culture to teach (Kramsch, 2013). However, as of the 1980s, researchers and teachers have started to discuss the intercultural dimension of language teaching (Corbett, 2003; Garrido and Álvarez, 2006). For this reason, promoting intercultural communicative competence has become the mainstream objective of foreign language teaching (Byram, 1997; Atay et al., 2009; Copple and Bredekamp, 2009; Avgousti, 2018; Çiftçi, 2016; Lash et al. 2022). Several terms denoting intercultural communication have been found in the literature. The terms "*cross-cultural communication", "international communication", "transnational communication", "international competence", "intercultural interaction", "multiculturalism", "pluraculturalism"* (Fantini, 2006), "*transcultural competence", "global citizenship", "transcultural competence",* and *"intercultural effectiveness"* (Glover and Friedman, 2015), and *"intercultural sensitivity"* (Bennett, 1986) are interchangeably used with intercultural competence.

Generally, foreign language teaching is acknowledged as a linkage to achieving native-like competence in the language aimed to be taught (Corbett, 2003). That is, as a result of dedication, hard work, and input (Krashen, 1989), learners are able to reach a point

where native-speaker competence is targeted. However, this approach disregards cultural and intercultural competence where language is viewed as a communicational tool to fulfill some social as well as linguistic skills (Corbett, 2003). Recently, culture has been integrated into curriculums designed based on the communicative language teaching (Atay et al., 2009). To explain, today's language classes focus on not only productive and receptive skills of language such as speaking, writing, listening, and reading, but also critical cultural and intercultural skills such as knowledge, awareness, and sensitivity. Within this scope, the chief objective of intercultural education is to promote the intercultural communicative competence of language learners instead of focusing on native likeness (Byram, 1997; Thorne, 2010).

A number of different models and frameworks trying to clarify the issue of intercultural competence have been proposed so far. Some of the prominent frameworks belong to Deardoff (2004; 2006), i.e. the Process Model of Intercultural Competence and the Pyramid Model of Intercultural Competence. Other important models are the Developmental Model of Intercultural Sensitivity (Bennett, 1986), the Intercultural Communicative Competence Model by Arasaratnam (2006), and the Intercultural Competencies Dimensions Model proposed by Fantini (2009). UNESCO (2013) proposed the following themes as core elements of intercultural education. Those themes are respecting others, self-recognition, empathy towards others, willingness to participate in intercultural dialogues, short-term adaptation to other worldviews, establishing intercultural ties, and having cultural sincerity. The most influential model that defines intercultural competence within the boundaries of foreign language teaching belongs to Byram (1997). This model includes five saviors i.e. skills. The first one is *"attitudes (savoir ^etre)",* which means being sincere, open, and unbiased. The second is the*"knowledge (savoirs)"*, referring to being knowledgeable about the customs, practices, and habits of other social groups. The third is the "*skills of interpreting and relating (savoir comprendre)"*, which suggests that individuals should have the required skills of interpreting an intercultural document or event and be able to relate it to the ones from their cultures. The fourth one is the "*skills of discovery and interaction (savoir apprendre/faire)"*, referring to the ability to acquire recent information about a culture and its practices and to be able to apply this information to the actual conversations. Finally, the fifth one is the*"critical cultural awareness (savoir s'engager)"*, including the ability to assess critically the cultural practices and viewpoints based on certain criteria.

The use of blended activities which means combining face-to-face classroom applications with the use of technological tools (Sharma and Barrett, 2007) can provide valuable opportunities to foster the intercultural communication competence of learners. One of the biggest benefits of internet-mediated communication (IMC) is the convenience it provides to reach communities that use the target language (Sarıçoban and Balaman, 2012). Therefore, it becomes possible to familiarize with the sociocultural characteristics as well as language characteristics of the target language speakers. Today, in an increasing number of language classes, various blended learning applications are adopted to promote the intercultural competence of learners (Lai et al., 2016). Accordingly, the use of online intercultural exchange in language classes has gained importance. Generally, intercultural exchanges in language classes occur in two ways (O'Dowd, 2011). The first one is the e-tandem model in which learners from different countries exchange languages and become more independent. In that type of interaction, learners are more autonomous whereas teachers have minimal roles in the interaction process. The second way is using blended intercultural telecollaboration in which teachers have an active role and tasks are divided into three as tasks related to information exchange, tasks of comparison and analysis, and tasks related to collaboration (Ware and O'Dowd, 2008). Thus, using blended intercultural activities may stimulate students to increase their ICC levels.

### 1.3. Problem Statement

In this global world where countries and cultures are deeply intertwined, acquiring intercultural skills and learning new languages are crucial (Çiftçi and Savaş, 2018). Türkiye is one of the countries falling into the expanding circle category of Kachru (1990). For that reason, learners have limited opportunities in terms of communicating interculturally using the English language (Ozdemir, 2017). Therefore, even if EFL students are able to learn English, they lack the necessary intercultural skills for effective communication as they do not have frequent chances to communicate with English speakers from different countries. In contexts where intercultural opportunities are rare (Hsu and Beasley, 2019), blended online intercultural activities can offer a worthwhile opportunity in terms of effective intercultural interactions. Those activities can offer an experience that is similar to real *in-country* experiences (Lázár, 2015). Therefore learners may have higher chances to improve required intercultural skills that are prerequisites of communicating interculturally. Without

those skills, students may have difficulties in exceeding the so-called *tourist* level in the foreign language (Byram, 1997). By designing a blended intercultural instruction that includes tasks conceptualized by Nunan (1989), it becomes possible to compensate for the gap occurring due to a lack of intercultural opportunities. In addition, there is a lack of a comprehensive framework to assess the ICC levels of students, especially in the Turkish EFL context. By adopting Deardoff's (2011) principles, the intercultural communication competence of Turkish EFL students can be assessed effectively.

### 1.4. Purpose and Rationale of the Study

By bearing the aforementioned concerns in mind, the study has several objectives. First, by conducting this mixed-methods study, it is aimed to examine the effects of intercultural instruction designed using the blended learning model on the intercultural communicative competence levels of EFL learners. Second, it is aimed to explore whether there is a difference between traditional environments and blended environments in terms of acquiring intercultural competence. Third, it is aimed to investigate the perceptions of EFL learners regarding the use of technological tools for intercultural purposes. The main motive that directed the researcher to carry out this project is the lack of opportunity that EFL learners have in terms of communicating interculturally. Learners are expected to familiarize themselves with the concept of culture and intercultural communication to communicate effectively. Additionally, in order to integrate technology into language classes effectively, factors associated with effective technology use need to be illuminated. Finally, it is aimed to discuss the integration of blended instruction into the curriculum of Foreign Language Education programs.

The study was carried out with the preservice ELT teachers. The reason why they were preferred as the research sample is that they have the English language skills required for effective intercultural communication, they all took the Foreign Language Exam (YDS) exam administered by the Students Selection and Placement Centre, and they got a certain score to be able to study in the ELT departments.

### 1.5. Significance of the Study

This study followed a mixed-methods design with the aim of collecting and analyzing data, and making deductions by using qualitative and quantitative data collection and analysis methods (Tashakkori and Creswell, 2007). With exploratory and confirmatory factor analyses, two scales, i.e. Intercultural Communicative Anxiety Scale for EFL Learners (ICANS) and Intercultural Communicative Awareness Scale for EFL learners (ICAWS), were developed by the researcher to measure the intercultural anxiety and awareness levels of EFL learners. Accordingly, it is possible to say that this study is significant because it contributed to the related literature by designing new instruments to measure the intercultural anxiety and awareness levels of Turkish EFL students. In addition, there is no study investigating the effects of blended intercultural instruction on the intercultural communication competence of EFL learners in the Turkish EFL context. Therefore, it can be said that the study is significant because it is the first study using mixed methods design to assess the intercultural competence levels of EFL learners based on a blended intercultural instruction designed according to Byram's (1997) framework in the Turkish EFL context. Finally, the study is significant as it helps to elucidate the perceptions of Turkish EFL learners regarding the use of technological tools for intercultural purposes.

### 1.6. Research Questions

In the present study, the following questions are tried to be answered.

**1-**

**a)** Does blended intercultural instruction have an effect on EFL learners' intercultural anxiety levels?

**b)** Is there any difference between traditional and blended environments in terms of intercultural anxiety levels of EFL learners?

**c)** Is there a relationship between age, gender, and intercultural experience with intercultural anxiety levels of EFL learners?

**2-**

**a)** Does blended intercultural instruction have an effect on EFL learners' intercultural awareness levels?

**b)** Is there any difference between traditional and blended environments in terms of intercultural awareness levels of EFL learners?

**c)** Is there a relationship between age, gender, and intercultural experience with intercultural awareness levels of EFL learners?

**3-**

**a)** Does blended intercultural instruction have an effect on EFL learners' intercultural sensitivity levels?

**b)** Is there any difference between traditional and blended environments in terms of intercultural sensitivity levels of EFL learners?

**c)** Is there a relationship between age, gender, and intercultural experience with intercultural sensitivity levels of EFL learners?

**4-** What are the students' perceptions and opinions regarding the use of blended activities for intercultural communication?

### 1.7. Limitations of the Study

This study is limited to 56 EFL learners studying in the first grade of the English Language Teaching Department at Balıkesir University. In addition, the scale development processes are limited to 502 EFL learners studying at the English Language Teaching Departments of İstanbul Medeniyet University, Canakkale Onsekiz Mart University, Samsun Ondokuz Mayıs University, Bursa Uludağ University, Erzurum Atatürk University, and Alanya Alaaddin Keykubat University. Since all of the participants are ELT students, further studies that focused on different departments are needed in order to be able to generalize the results. Another limitation is that the study uses a mixed-methods design in which data are collected through Likert-type scales and interviews and analyzed accordingly. Thus, further studies using different research designs are needed to investigate the issue in detail. Additionally, the study is based on the instruction created according to the framework proposed by Byram (1997). Further studies using different models should be carried out to

broaden the perspective regarding the issue. Finally, this study investigates variables such as intercultural awareness, anxiety, and sensitivity. Other studies should focus on different combinations of variables to explore the issue.

### 1.8. Assumptions of the Study

The study proposes the following assumptions.

1. It is assumed that the chosen sample represents the target population.
2. It is assumed that all of the participants voluntarily accept to participate in the study.
3. It is assumed that all of the participants correctly respond to the scales and do not give false or misleading responses.
4. It is assumed that EFL learners' language skills are adequate to take part in online activities.
5. It is assumed that EFL learners have the necessary technological literacy to be able to participate in online activities.
6. It is assumed that there is a difference between traditional learning environments and blended environments in terms of intercultural communication competence.

### 1.9. Definition of the Key Terms

**Blended learning: "**the combination of instruction from two separate systems known as traditional face-to-face instruction and distributed computer-mediated (CM) instruction" (Graham, 2006).

**Culture:** "the core assumptions, beliefs, values, life directions, policies, procedures, and practices shared by mutual people that significantly affect each member's behavior and interpretation" (Spencer-Oatey, 2008).

**Intercultural Communication Competence:** "the skill required for effective and appropriate communications which is used to compromise each other in an environment that is culturally distinctive" (Chen and Starosta, 1996).

**Intercultural Awareness: "**the awareness of behaviours directed by culture, the awareness of other people's behaviours directed by culture, and the ability to define one's cultural viewpoint" (Tomalin and Stempleski, 1993).

**Intercultural Anxiety:** "the apprehension caused by communicating with individuals from different culture or country" (Neuliep and McCroskey, 1997).

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# CHAPTER II
# RELATED LITERATURE

This chapter involves two sections. The first part explains the theoretical framework related to the study. It includes a detailed definition of culture, cultural theories, the role of culture in the EFL context, culture pedagogy in ELT, Communicative Competence, Intercultural Communicative Competence (ICC) models, Byram's (1997) ICC framework, Intercultural Anxiety, Intercultural Awareness, Constructivism, Social Constructivism and the theoretical background of Blended Intercultural Instruction. The second section, on the other hand, reviews the research regarding intercultural communication and blended learning.

## 2.1. Theoretical Framework

### 2.1.1. Culture, Communicative Competence, and ELT

Although there has been a significant amount of research conducted to discuss the status of culture in EFL classes (Alptekin, 1993; Kramsch, 1995; Atay, 2005), there is no agreement among researchers regarding the exact definition of culture in language teaching (Spencer-Oatey, 2012). Culture can be considered a living memory that covers the codes of the lifestyles that have been formed for centuries. Those include lifestyles, material, and spiritual values, which have been shown with interests, perceptions, attitudes, and behaviors for centuries, and have been transferred from one generation to the other as a legacy (Göçer, 2012). Within this scope, culture is defined as the core assumptions, beliefs, values, life directions, policies, procedures, and practices shared by mutual people that significantly affect each member's behavior and interpretation (Spencer-Oatey, 2008). Schein (2011) explains that culture is a set of mutual basic premises, formed by a particular group, deals with difficulties related to adaptation and integration, is accepted as valid, and passes from one generation to the other. Hofstede (1994) states that culture is a collaborative organization of the intellect that helps to differentiate the members of a group from another. Thus, considering numerous definitions in the literature, it can easily be understood that culture is a very complex notion and scholars have not yet reached a consensus regarding the definition.

The aim of human communication is to be able to convey meaning through various means. Language is the most important means of communication. However, using language solely is not always enough to communicate effectively. There are other elements that complete the human language. Languages have distinctive cultural features that enable individuals to create proper and meaningful utterances in various settings. Those features, which are specific to the society where the language is spoken, help to communicate effectively among individuals. Communicative competence was first introduced by the linguist, sociolinguist, and anthropologist Dell Hymes (1967). His views were seen as a reaction to the theories of the famous linguist Noam Chomsky (1957), who first proposed the term *"competence"*. While Chomsky emphasized that learners are expected to have linguistic competence, namely the rules and regulations regarding phonology, morphology, and syntax, and do not take the social factors into consideration, Hymes claimed that as well as *linguistic competence*, learners are to have *sociolinguistic competence,* i.e. appropriate use of language in social contexts, to communicate in an effective manner. In addition, Chomsky asserted that the context in which a language event occurs is not of importance since language acquisition results from innate mechanisms an individual has. Hymes asserts that acquisition of a language is bound to context, and there are other factors to be considered in addition to linguistic competence, i.e sociolinguistic competence. The notions of Hymes became influential among teachers and linguists worldwide and many adopted the communicative approach as a reaction to the traditional audiolingual and grammar-translation methods. In the 1980s, the literature regarding communicative competence was enriched. Canale and Swain (1980) suggested the term communicative competence, adding the *strategic competence* dimension which means the ability to solve problems encountered during communication and adding the *discourse competence dimension* (Canale, 1983) which refers to the skill required for producing and comprehending utterances in the meta-sentence level. Based on Canale and Swain's model, Savignon (1983) proposed the Inverted Pyramid Model, which emphasizes the interdependence between competences and includes strategic competence in addition to grammatical competence, discourse competence, and sociocultural competence. Another model based on Canale and Swain's approach belongs to Van Ek (1986). He suggested that communicative competence consists of six dimensions; *linguistic competence*, which means the accurate use of grammar, *sociolinguistic competence*, which means becoming aware of the relationship between verbal cues and their

meanings within a context, *discourse competence,* which means the ability to employ correct strategies for effective communication, *strategic competence,* the ability to implement correct communicative strategies for compensating for the communication problems, *socio-cultural competence,* which focuses on the notion that cultural and social aspects have utmost importance in shaping the course of communication, and individuals need to be familiarized with those aspects, and *social competence,* which emphasizes the importance of having enthusiasm for communication with others. Bachman (1990) developed the Communicative Language Ability (CLA) model that involves *language competence,* which is the knowledge of the language, *strategic competence*, which is using the language knowledge appropriately, and *psychophysiological factors*, which refers to the mental factors that have an effect on the successful use of linguistic knowledge. According to this model, language competence is divided into two as *organizational competence,* which includes *grammatical competence* and *textual competence* subdimensions and *pragmatic competence,* which consists of *illocutionary competence* and *sociolinguistic competence* subdimensions. Celce-Murcia et al. (1995) added the term actional competence in the communicative competence literature. Accordingly, in addition to other competences, language learners should have actional knowledge, which refers to the skill of interpreting and producing speech acts. They additionally changed Canale and Swain's sociolinguistic competence as sociocultural competence, the background knowledge of culture, and grammatical competence as linguistic competence, which involves the knowledge of sound system and lexicon in addition to grammar. Littlewood (2004) claimed that the ultimate purpose of language acquisition is to have five dimensions of communicative competence, i.e. *linguistic competence, discourse competence, pragmatic competence, sociolinguistic competence,* and *sociocultural competence*. Although the model is basically the same as the other proposed models, there are some minor modifications. Littlewood (2004) changed grammatical and strategic dimensions to linguistic competence and pragmatic competence. Finally, Celce-Murcia (2007) modified her model of communicative competence. Her revised model included *sociocultural competence*, which is the ability of pragmatic knowledge, *discourse competence*, which is the ability to choose, organize, and arrange utterances to send cohesive spoken signals, *linguistic competence*, which involves phonological, lexical, morphological, and syntactic knowledge, *formulaic competence*, which is the knowledge of formulaic expressions such as chunks, collocations, idioms, and lexical frames, *interactional competence*, which consists of three subdimensions as *actional*

*competence* referring to how to perform speech acts, *conversational competence* referring to turn-taking system, and *nonverbal/paralinguistic competence* referring to body language use, nonverbal turn-taking cues, eye movements, backchannelling, gestures, proxemics, touching, and nonlinguistic utterances. The aforementioned communicative competence models are summarized in Figure 1 below.

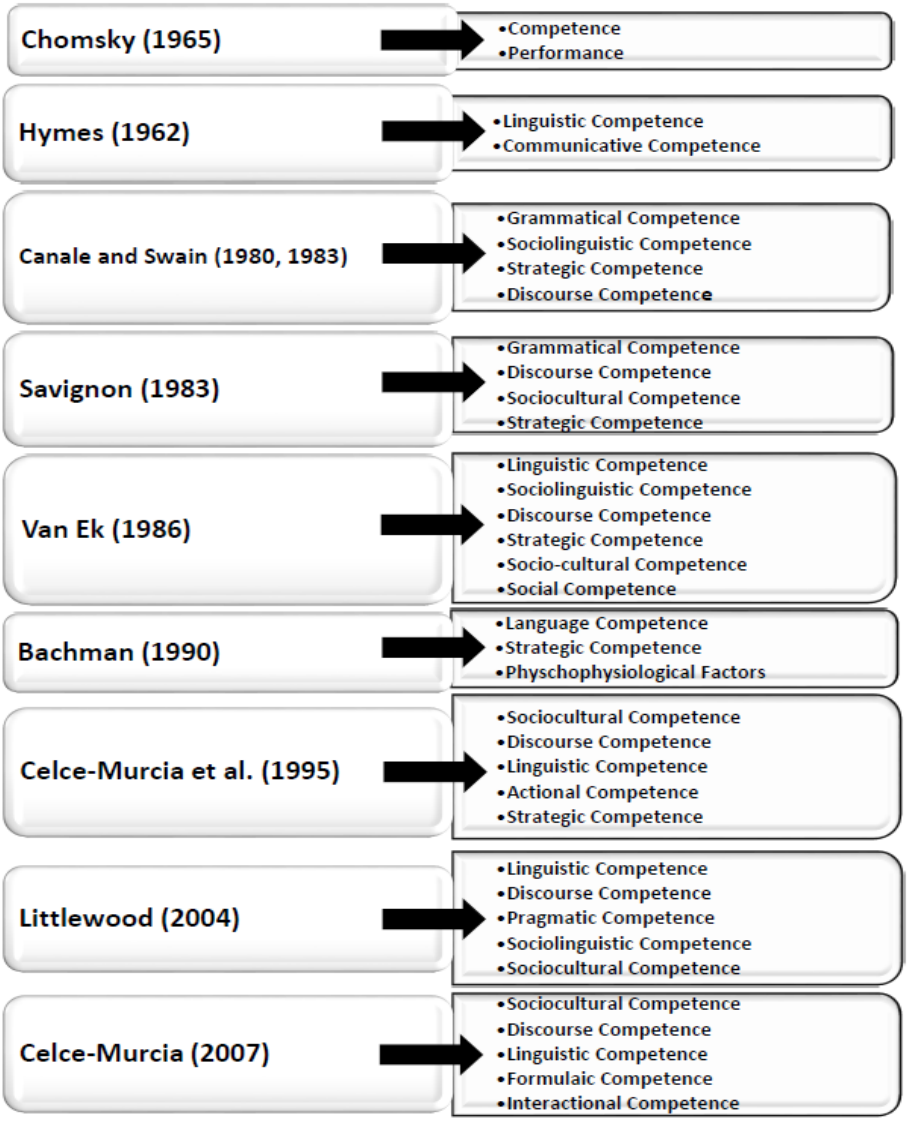



Figure 1. Summary of Communicative Competence Models

Culture is beyond what we see. Hall (1976) introduced the famous iceberg model of culture. In this model, culture is symbolized as an iceberg (Figure 2). That is, although there are some visible aspects above the surface, the real features are beneath the surface level. Accordingly, we see only a small amount of culture above the surface level in our daily lives.

Namely, language, folklore, dress codes, fine arts, food, festivals, etc. constitute the visible part. However, culture has much more than those. Below the surface level, culture has many invisible parts as beliefs and assumptions, manners, values, attitudes, thought patterns, family roles, gender roles, expectations, ethics, aesthetics, body language, and gestures. Grasping invisible features enables individuals to have a better understanding of the society with which they are interacting. According to Bennett et al. (2003), the Big "C" focuses on apparent, tangible, and theoretical points i.e. historical, geographical, and political features while the Little C touches on somewhat specific and pragmatic facets of culture such as diet and greetings. In another definition, Lee (2009) describes the Big "C" as a group of realities about the history, traditions, geography, education, arts, and economy of a particular linguistic community, while he defines the Little "C" as the ordinary elements of life such as perspectives, preferences, opinions, popular culture, etc. Another classification related to culture is made by Ho (2009) as internal and external culture. While the former is acquired indirectly and includes particular dimensions such as beliefs, ideological patterns, values, and myths that are resistant to change, the latter is more about explicit knowledge that is learned consciously with the help of senses and can change over time. Therefore, all of the visible and invisible features of the culture should be considered in the educational programs to be carried out.

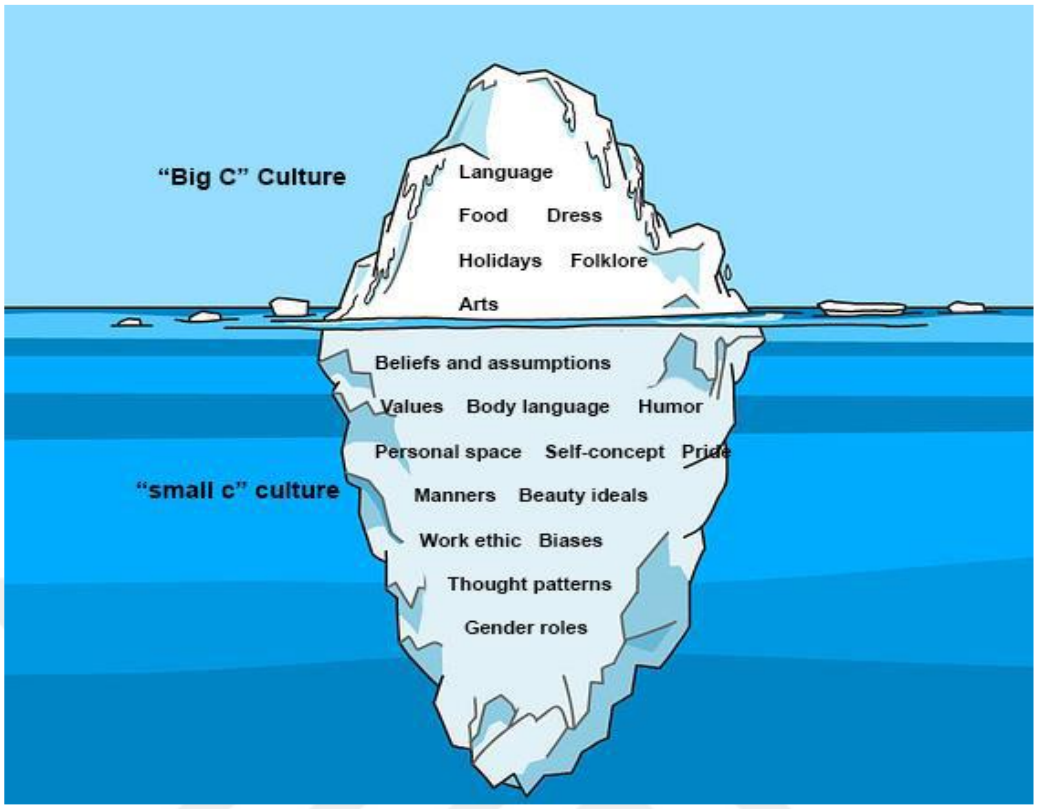



Figure 2. Cultural Iceberg Model (Upton, 2019)

For decades, the debate around foreign language teaching has centered on what and how culture should be conveyed to students (Chapelle, 2016). In recent years, culture has become as a cornerstone of language teaching (Atay et. al., 2009). Teaching culture is considered to be the fifth skill that improves the entire learning process (Vernier et al. 2008). That is to say, in addition to the four basic language skills, as the fifth skill to be learned, culture is required to be included in language curriculums. As well as mastering traditional language skills such as vocabulary and grammar, students who would like to be fluent in the target language need to familiarize themselves with the sociocultural rules employed by native speakers while interacting with each other (Neff and Rucynski, 2013). According to Kramsch (1993), culture is to be included in the whole language learning process to achieve communicative competence. Piątkowska (2015) mentions cultural competence to be taught in foreign language classes under three divisions; the knowledge-oriented approach, the contrastive approach, and the intercultural communicative competence approach. The basic purpose of the knowledge-oriented approach is to increase learners' literary skills in the target language. Namely, students are expected to be able to effectively read and write in the learned foreign language. The key premise of the contrastive approach is to raise

learners' consciousness related to the similarities and differences between their cultural features and the features of the target culture. The intercultural approach which will further be explored in detail is a relatively new approach whose fundamental assumption is to equip students with the skills needed to communicate with individuals from other countries or cultures. In order for the affective and cognitive development of the learners, the education system should be sensitive to cultural values and experiences. Accordingly, learning-teaching interactions in the educational environment should be shaped on the basis of the social environment and cultural values. Thus, the concept of culturally responsive pedagogy has been emphasized so that learners from different beliefs, ethnicities, and social groups can benefit from learning opportunities in the education process (Sleeter, 2011).

### 2.1.2. Intercultural Communication Competence (ICC)

Intercultural communication competence is the complete and successful adaptation of individuals to an intercultural context in terms of individual, social, communicative, and strategic aspects. The concept of intercultural communication competence includes simultaneous and collaborative processes which individuals are expected to carry out. However, before moving further, the concept of ICC needs to be examined in detail. Actually, the concept of ICC is derived from the communicative competence. The concept of communicative competence including linguistic, paralinguistic, sociolinguistics, and non-verbal dimensions was developed by Hymes (1972) and exercised in language teaching for about a half-century in order to determine miscellaneous facets of effective communication in a culture (Fantini, 2019). Intercultural competence, on the other hand, has often been assumed as a subdimension of communicative competence (Deardoff, 2006). Several terms have been used in the literature referring to intercultural communication. According to Fantini (2006), some of those terms denoting intercultural communication are "*cross-cultural communication", "international communication", "transnational communication", "international competence", "intercultural interaction", "multiculturalism",* and *"pluraculturalism"*. In addition, Glover and Friedman (2015) state that "*transcultural competence", "global citizenship", "transcultural competence", "intercultural effectiveness",* and *"intercultural sensitivity"* are the terms used interchangeably with intercultural competence.

There has been a substantial amount of research using various techniques to study intercultural communication (Carbaugh, 2007). *The theoretical model* discusses intercultural communication within the scope of the conceptualization of a problem. *The descriptive model* is used to reveal the genuine facts about intercultural communication and describe the interrelations in detail. *The interpretative model* aims to interpret communication in terms of the meaning construction processes. *The comparative model* investigates intercultural interactions by making comparisons between cultures in terms of similarities and differences. Finally, *the critical model* studies intercultural communication by investigating topics related to the critical theory such as gender relations, power, and inequality (Martin and Carbaugh, 2012). In another classification, Lustig and Koester (1993) divide the research on intercultural communication into four *trait approach*, *perceptual approach*, *behavioral approach*, and *culture-specific approach*. The trait approach focuses on the personal features of individuals. The perceptual approach emphasizes attitudes and understanding in terms of successful intercultural communication. The behavioral approach investigates the behaviors of individuals during intercultural interactions. And, the culture-specific approach examines culturally-distinctive behaviors such as manners and greetings. Collier (1989) states that ICC is examined under four approaches. In the ethnography of speaking approach, culture is believed to be conveyed via language and symbols. *The cross-cultural attitudes* approach is similar to the cognitive approach that examines intercultural communication competence within the scope of human cognition. *The behavioral approach* emphasizes practical communication skills. And finally, *the cultural identity approach* investigates intercultural communication competence within the scope of traditions, values, and identity (Arasaratnam and Doerfel, 2005).

Our focus, on the other hand, will be on intercultural communication competence among individuals from different countries, particularly those speaking the target language. Gudykunst (2002) explains intercultural communication as communication between individuals from different countries, which is consistent with our understanding. Chen and Starosta (1999) define intercultural communication competence as a tool for successful interaction that enables us to overcome cultural differences. They emphasized the importance of three dimensions to define intercultural communication. Those are *intercultural awareness* which includes mental processes, *intercultural sensitivity* which involves emotional processes, and *intercultural adroitness* which covers attitudes and

manners. Similarly, Kim (1992) proposes the concept of "adaptive capacity" to emphasize the mental, affective, and behavioral aspects of intercultural communication competence. Taylor (1994) states that intercultural communication competence is a dynamic skill through which individuals enhance a flexible capacity and change their point of view in order to communicate effectively with different cultures. Alred and Byram (2002) assert that the aim of intercultural communication competence, which has become a dominant subject in today's world, is to be unbiased and adaptable while communicating with individuals from different cultures. Huang et al. (2003) mention that an interculturally competent individual is able to establish good relations with others and sort out complex problems that occur due to differences among cultures. Similarly, Byram (1997) states that individuals who have intercultural competence can interact with other people by feeling curious and being open to others. Spitzberg (1989) notes that intercultural communication competence includes three dimensions; *skills*, *motivation*, and *knowledge*. In this classification, skills mean the capacity needed to communicate in an appropriate way. Motivation refers to the willingness to communicate with people from different cultural backgrounds. Finally, knowledge means critical cultural awareness and comprehension (Huang 2014). Fantini (2000) suggested that individuals are expected to have certain skills in order for an intercultural interaction to be successful. Those are *awareness*, *attitudes*, *skills*, and *knowledge*. Fantini's framework that summarizes the long developmental process of intercultural communication can be seen in Figure 3 below. To sum up, intercultural communication can be explained as the interaction that occurs among individuals from different cultural environments regardless of being in the same country (Kramsch, 1998).

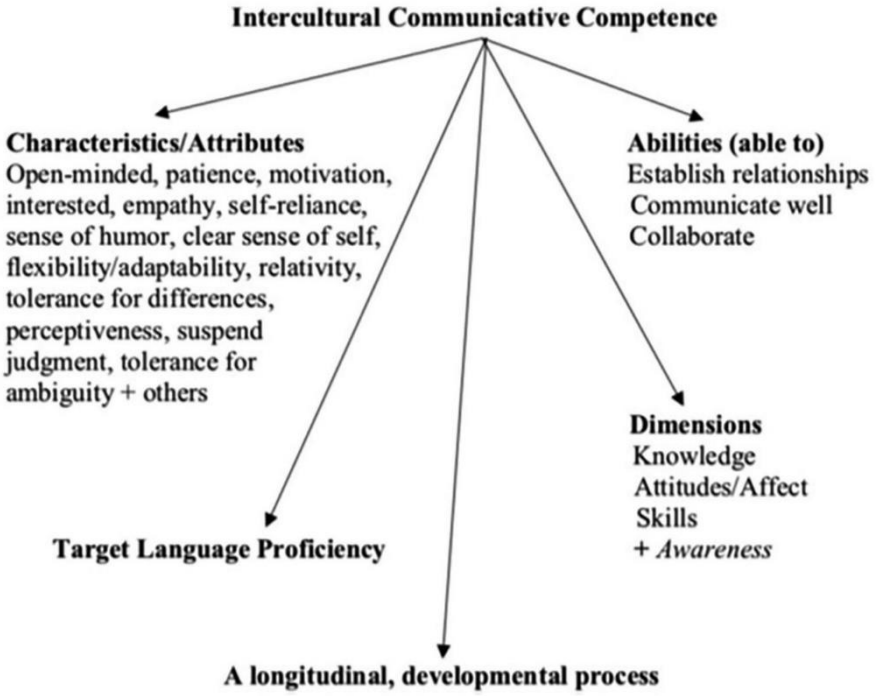



Figure 3. Constructs of intercultural communication (Fantini, 2020)

There are various empirical frameworks and models to explain intercultural communication. One of the prominent frameworks belongs to Deardoff (2004; 2006). In her Pyramid Model of Intercultural Competence (Figure 4), Deardoff (2004) emphasizes the importance of having some prerequisites to communicate effectively with people from different cultures. Before moving to the upper levels, individuals should respect others, be open, and be curious about other cultures. Following that, individuals should be aware, have profound knowledge and understanding, and be familiar with the sociolinguistic features of their culture. Additionally, at this level, individuals should have listening, monitoring, interpreting, analyzing, evaluating, and relating skills related to intercultural communication events. After completing this step, individuals are able to adapt to different communication styles and settings. In the final step, individuals are able to communicate in an effective and appropriate way and achieve the desired external outcome.

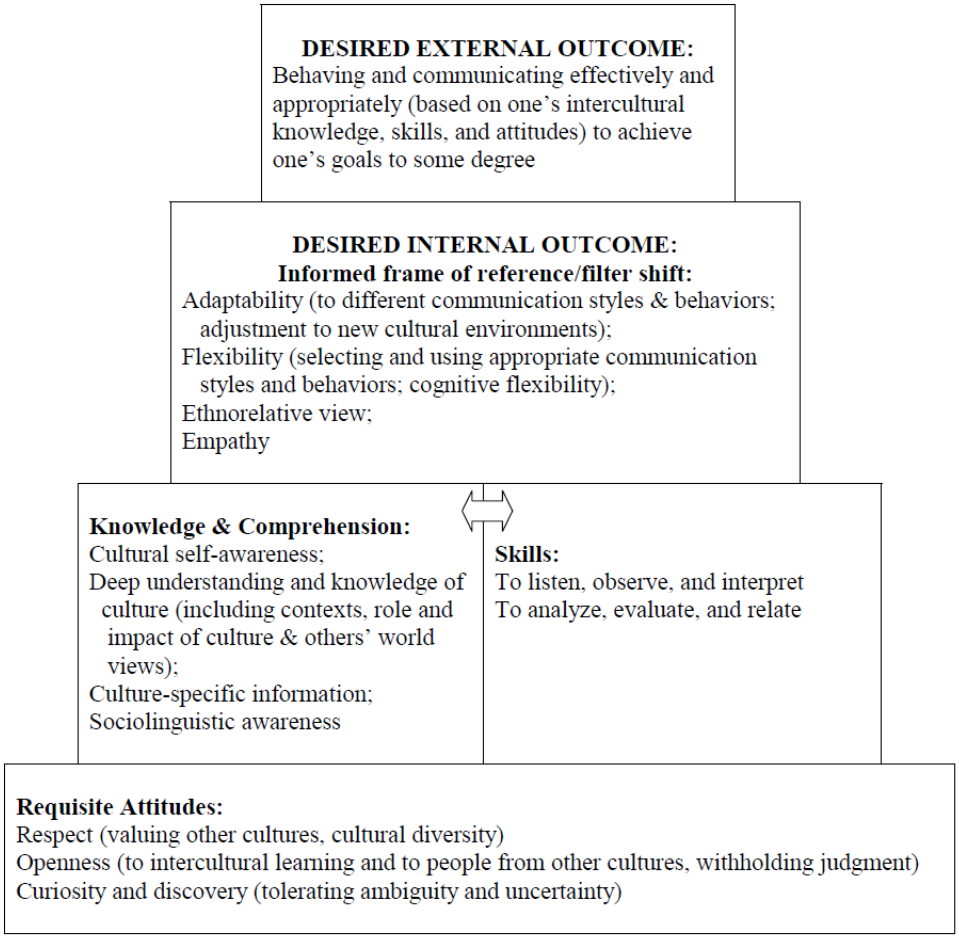



Figure 4. Pyramid Model of Intercultural Communication (Deardoff, 2004)

According to Deardoff (2004; 2006), the most important construct for successful communication is the favorable attitudes of individuals, which constitute a basis for effective intercultural communication. In the other model which is called the Process Model of Intercultural Communication (Figure 5), Deardoff (2006) mentions intercultural communication as a dynamic cyclical process. Again, the prerequisite of communication is positive attitudes, the building block of the interaction. She focuses on three main attitudes; respect, being open, and being curious. Following this, individuals should possess the necessary knowledge including culture-specific information, self-awareness, and sociolinguistic awareness. After that, individuals gain internal skills such as adaptability, flexibility, and empathy. In the final step, interactants are able to communicate appropriately and effectively during intercultural encounters. However, it should be noted that this process is cyclical. In other words, the same process takes place each time international communication occurs.

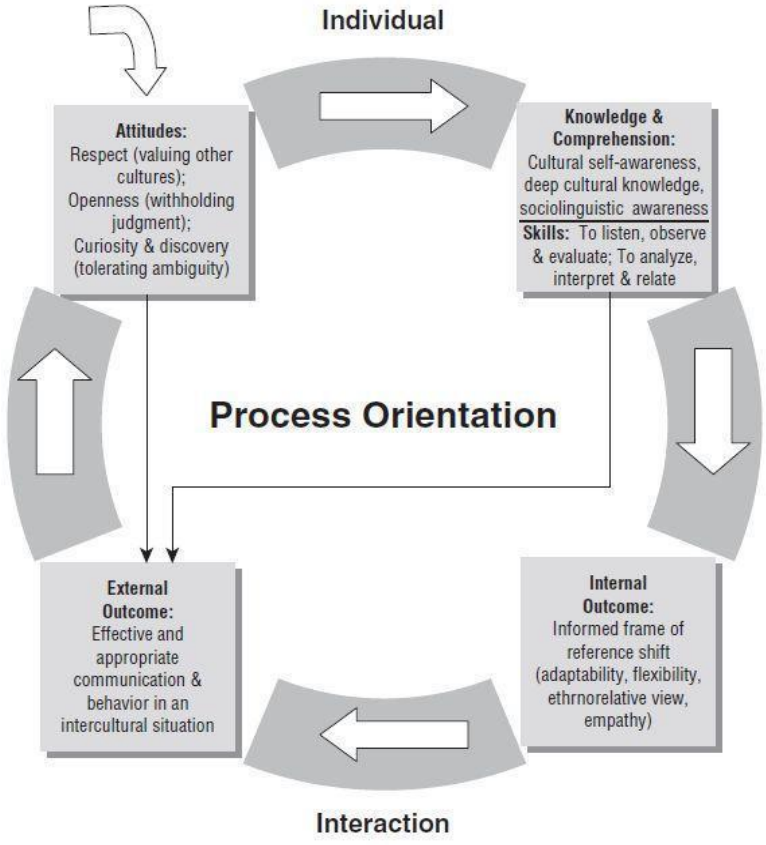



Figure 5. Process Model of Intercultural Competence (Deardoff, 2006)

Among the models investigating and examining intercultural communication skills, few have been as influential as the Intercultural Communicative Competence Model of Byram (1997). According to this model, individuals need some skills in order to interact efficiently. Byram's model is a revised version of communicative language teaching (Piątkowska, 2015). Accordingly, intercultural communicative competence consists of linguistic competence, sociolinguistic competence, discourse competence, and intercultural competence dimensions (Byram, 1991). Linguistic competence refers to the ability to use linguistic rules and produce appropriate utterances in the target language. Sociolinguistic competence emphasizes the ability to be aware of, interpret, and understand the underlying meaning in the context where the communication occurs. Discourse competence refers to the ability to produce and interpret certain intercultural texts using some strategies. Intercultural competence, on the other hand, includes five components. The first one is *"attitudes (savoir ^etre)"*. It means being sincere, open, and unbiased. The second is the*"knowledge (savoirs)"* referring to being knowledgeable about the customs, practices,

and habits of other social groups. The third is the"*skills of interpreting and relating (savoir comprendre)".* It suggests that individuals should have the required skills of interpreting an intercultural document or event and be able to explain and relate it to the ones from their own cultures. The fourth one is the "*skills of discovery and interaction (savoir apprendre/faire)"* referring to the ability to acquire recent information about a culture and its practices and to be able to apply this information to the actual conversations. Finally, the fifth one is the *"critical cultural awareness (savoir s'engager)".* It refers to the ability to assess critically the cultural practices and viewpoints based on certain criteria. Byram's framework is presented in Figure 6.

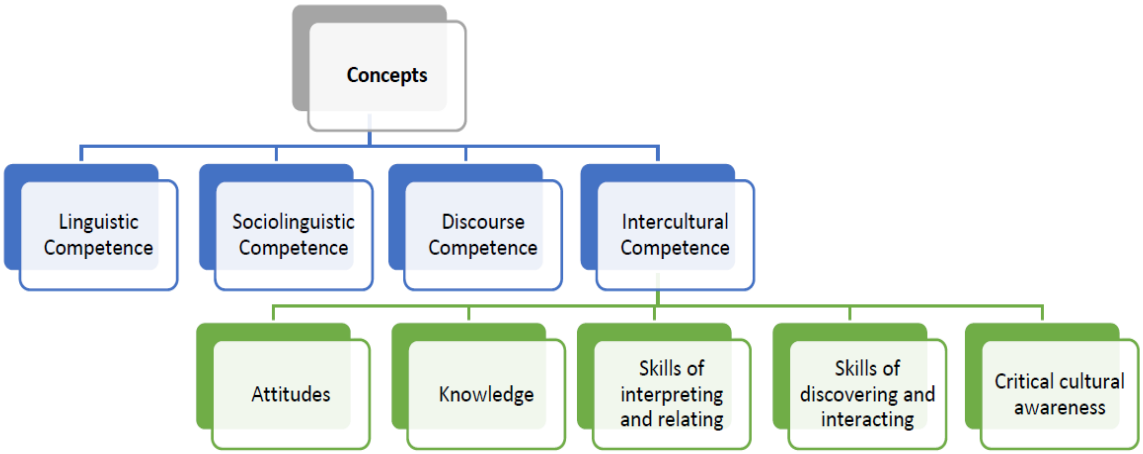



Figure 6. Intercultural Communicative Competence Framework (Byram, 1997)

### 2.1.3. Intercultural Awareness

The core assumptions, beliefs, values, lifestyles, policies, procedures, and practices shared by a number of people living in a certain area are called the elements of culture (Spencer-Oatey, 2008). From the communicative stance, culture is considered as the lifestyles and behavioral patterns of target language speakers (Kramsch, 2013). Cultural awareness, accordingly, is being aware of those features, and the ability to use this knowledge appropriately. It is defined as the ability to perceive the culture of the society and different cultures and to distinguish between them (McFarland, 1999). The concept of cultural awareness was first encountered in the national curriculum of England and Wales in 1988 (Byram, 1994). It includes the awareness of behaviours directed by culture, awareness

of other people's behaviours directed by culture, and the ability to define one's cultural viewpoint (Tomalin and Stempleski, 1993). According to Tolinson and Masuhara (2004), as the cultural competence of an individual increases, their intellect develops, tolerance improves, and sensitivity levels increase. It is difficult for learners to have a native-like cultural competence in the target language. Becoming culturally aware, on the other hand, enables learners to grasp the presence of other cultures and provides students with the opportunity to compare their culture with other cultures (Tomlinson, 2001). From the critical viewpoint, cultural awareness is explained as the skill required for critical evaluation based on a certain viewpoint, action, and outcome regarding both own culture and other cultures (Byram, 1997). Accordingly, the ultimate purpose of effective communication is to be able to comprehend the similarities and differences among cultures because increasing cultural awareness helps us to overcome negative behaviours such as stereotyping or misjudgement.

Having cultural awareness is a prerequisite to develop effective intercultural communication competence (Bandura, 2011). That is, individuals who are culturally knowledgeable and self-aware are more successful while establishing effective intercultural communication. According to Hofstede (1994), becoming interculturally competent requires having awareness or consciousness regarding differences, being knowledgeable about the causes of differences, and having non-verbal communicative skills. In parallel with the widespread adoption of the lingua franca status of English (Jenkins, 2009), it has become a global language. For this reason, the questions of which type of English should be taught and how the culture should be integrated have come to the fore. As Kachru (1990) stated, there are three types of countries according to the role of English. The inner circle countries are the countries whose native language is English such as the U.S. and the U.K. The outer circle countries are the countries in which English is spoken as a second language such as Pakistan and India. Most of these outer circle countries are former colonies and adopted English as a second language. In countries belonging to the expanding circle such as Türkiye and Japan, English is taught as a foreign language and most communication occurs among non-native speakers (Alptekin, 2002). Therefore those learners have limited opportunities to develop their language skills as well as intercultural skills.

Intercultural awareness is a mindful comprehension of culture and its practical applications during intercultural interactions (Baker, 2009). In his famous ICC model,

Byram (1997) put critical cultural (intercultural) awareness at the center. He defines intercultural awareness as the skill required to make critical assessments about cultures based on certain criteria. Baker (2009) states that intercultural awareness is an extension of cultural awareness and focuses more on the needs of EFL speakers in the expanding circle countries. One of the most influential models of intercultural awareness belongs to Baker (2009). This model became the basis for the development of the Intercultural Communicative Awareness scale for EFL learners (ICAWS), which was designed by the researcher for this study. According to this model, the first level is called as basic cultural awareness and includes a general awareness of one's culture and comprehension of beliefs, values, and behaviors at a basic level. In addition, this level covers the understanding that there may be differences among cultures. In the second level named as advanced cultural awareness, a more sophisticated comprehension of language and culture is claimed. At this level, individuals are required to have a more complex understanding regarding their own culture. Therefore, they are able to assess their own culture and notice possible problematic areas causing misunderstandings (Baker, 2011). The third level of this model is called as intercultural awareness. Individuals reaching this level are able to move beyond seeing cultures with a restrictive viewpoint and notice cultural refences and practices related to intercultural communication (Baker, 2009). Therefore, teachers, policy makers, and curriculum and material developers should work together to promote intercultural awareness and help learners to attain Level 3. Figure 7 below shows the model proposed by Baker (2009).

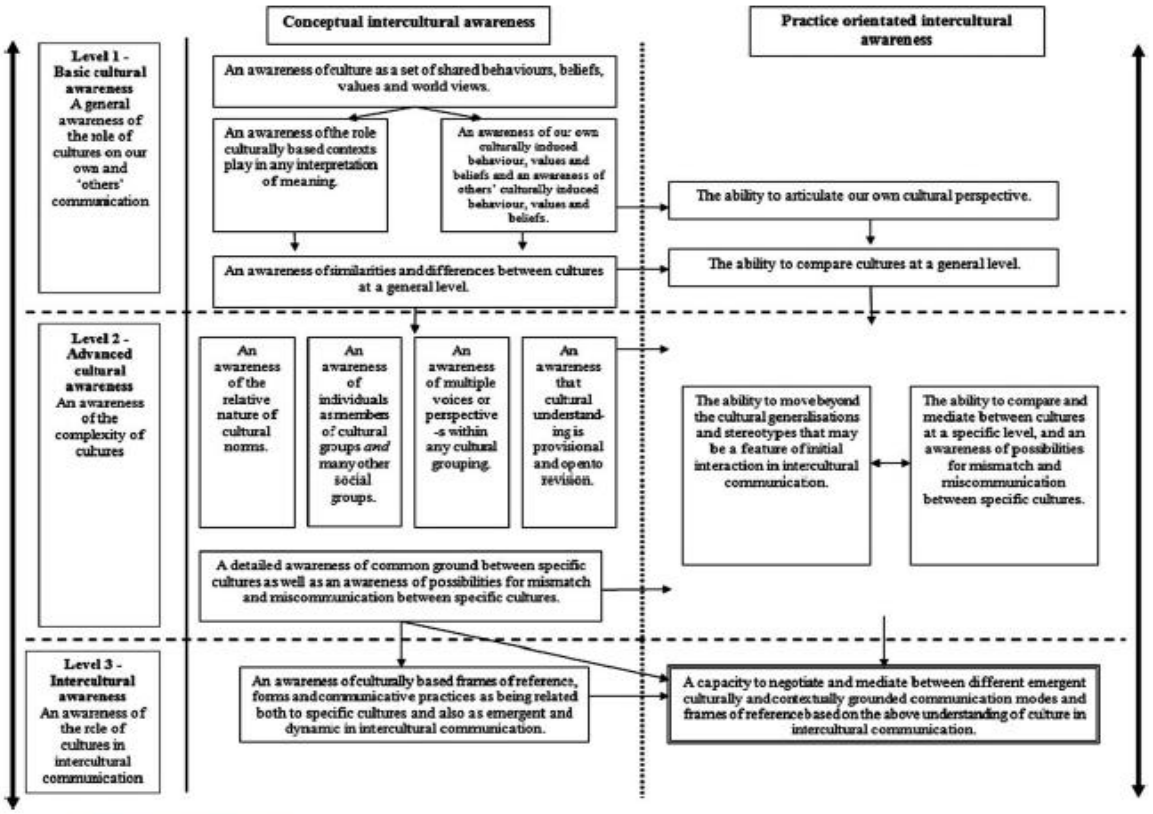



Figure 7. Intercultural Awareness Model (Baker, 2009)

### 2.1.4. Intercultural Anxiety

As a basic human trait, anxiety is a multidimensional concept and related to many fields such as psychology, linguistics, and sociology. However, our focus will be on anxiety within the scope of language learning. Anxiety has been widely researched in the literature related to language learning (Aydin, 2018). As one of the fundamental affective factors in language learning, Horwitz et al. (1986) define anxiety as specific set of behaviors, beliefs, and self-image caused naturally by the learning and teaching procedure. It is an unfavorable affective condition accompanied by feelings such as nervousness and stress as well as a strong will to eliminate the source of anxiety (MacIntyre, 2017).

Anxiety is generally divided into three as trait anxiety, state anxiety, and situation-specific anxiety (MacIntyre and Gardner, 1991). First, trait anxiety is related to the characteristic of an individual. Namely, ones who are more prone to become anxious irrespective of the situation are accepted as having trait anxiety (Pappamihiel, 2002). They

are anxious due to their characteristics and experience anxiety whatever the conditions are. Individuals who experience trait anxiety are persistently anxious and are likely to perceive events with more apprehension (Spielberger, 1983). From the definitions, it can be understood that it is a negative feeling and affects cognition in an unfavorable way regardless of the situation (Macintyre and Gardner, 1991). Second, state anxiety is defined as an impermanent feeling triggered by specific conditions or events (Spielberger, 1972). That is, according to the perception of danger and threat, individuals feel state anxiety. In some instances, it can intensify while in others, it may decrease. It is a natural response to stimulants when a threat or frightening situation is encountered. Individuals who have state anxiety may feel anxious before specific events (Spielberger, 1983). The main difference between trait and state anxieties is that trait anxiety is permanent and a part of character while state anxiety is temporary. Third, situation-specific anxiety is defined as a fear related to a specific situation (MacIntyre and Gardner, 1991). It is similar to state anxiety but it is related to a single situation. Learners experience situation-specific anxiety prior to public speech or taking an exam. In language learning, the lack of knowledge can result in this type of anxiety (MacIntyre and Gardner, 1991). Since situation-specific anxiety is more related to the experienced situation, it is possible to avoid it. By creating anxiety-reducing learning environments, the level of anxiety that learners experience may decrease.

In another classification, anxiety is mentioned as having two types, i.e. facilitating and debilitating anxiety (Alpert and Haber, 1960). The first one is an anxiety that stimulates learners to complete learning tasks effectively and be ready emotionally (Scovel, 1978). Considering this, it is possible to say that facilitating anxiety is favorable in language classes as it enthuses learners to finish language learning tasks. Debilitating anxiety has a negative effect on learners' performance because it encourages learners to escape from tough situations such as completing a new assignment or making a presentation (Phillips, 1992). According to Scovel (1978), individuals who have high debilitating anxiety levels are more likely to demonstrate avoidance behaviors. When they encounter situations about which they are not fully certain, they try to refrain from this situation, which is not desired in language learning. Within this scope, designing language learning environments that stimulate a reasonable level of facilitating anxiety and decrease debilitating anxiety levels contributes language learning positively.

Gardner and MacIntyre (1993) define language anxiety as the fear faced once the individual is required to use a language different from native language, which he / she is not completely competent. Accordingly, it is possible to say that the feelings and emotions experienced by learners during language learning cause foreign language learning anxiety. There are three basic elements of foreign language anxiety (Horwitz et al., 1986). Those are *communication apprehension, test anxiety*, and *fear of negative evaluation*. Communication apprehension refers to the fear of communicating with other people. Some individuals experiencing communication apprehension may avoid communication due to a lack of target language knowledge even if they are outgoing in their daily life. Accordingly, individuals who have a high level of anxiety are likely to keep silent and avoid speaking in language classes. Those individuals have a tendency to think that expressing themselves and understanding people are difficult (MacIntyre and Gardner, 1991). The second type of anxiety is the *test anxiety*. Horwitz et al. (1986) state that individuals who have a high level of test anxiety frequently set unachievable goals and look for perfect results. However, that pressure may have a negative effect on performance regardless of students' proficiency levels. As a result, students can be unsuccessful even if they have the necessary skills to complete the tasks. The last type of anxiety is the *fear of negative evaluation*. According to Horwitz et al. (1986), *fear of negative evaluation* refers to concerns regarding other people's ideas and individuals who have a high fear of negative evaluation are likely to avoid other people's judgement about themselves. Due to the anxiety about the judgements of other people, students in language classes are afraid of making mistakes and avoid communication as much as possible, which may negatively affect their language performance.

Intercultural communication anxiety is used interchangeably with intercultural communication apprehension in the literature. Intercultural communication apprehension is described as the apprehension caused by communicating with individuals from different culture or country (Neuliep and McCroskey, 1997). They developed the Personal Report of Intercultural Communication Apprehension (PRICA) and the Personal Report of Interethnic Communication Apprehension (PRECA) scales, which constitute the base for the ICAN scale developed for this study. Gudykunst and Kim (1997) claim that since individuals from other countries tend to be seen as strangers, people can easily become anxious in an environment which is culturally unfamiliar. Therefore, individuals who encounter people from an unfamiliar culture may definitely show avoidance behaviours, which is a

psychological barrier preventing effective communication. Those behaviors may be caused by a lack of language skills or cultural differences. According to, Gudykunts (1995), to be able to carry out interactions effectively with individuals from other cultures, one needs to deal with anxiety and uncertainty. Accordingly, individuals tend to have a mental reaction to a situation that cannot be predicted or described, which refers to uncertainty. In addition, they experience uneasiness, worry, and apprehension when interacting with individuals from different cultures, which refers to intercultural anxiety. As a result, language learners who have a high level of intercultural communication anxiety are generally not willing to communicate and show avoidance behaviors. Teachers should be familiar with those students and try to create anxiety-reducing learning environments by using online intercultural tools.

### 2.1.5. Constructivisim

Dominating the literature regarding education, constructivism is defined as knowledge or learning theories in which individuals construct knowledge and develop comprehension according to their existing knowledge and new information encountered (Lowenthal and Muth 2008). Constructivism is based on the works of Piaget (1952, 1968). It has several distinctions from the philosophical understanding of what knowledge is and what it means to know something. The basis of constructivism is that knowledge and comprehension are not independent of the individual and that individuals actively construct the knowledge in their minds (Fox, 2001). The constructivist learning theory claims that individuals create their own knowledge based on their experiences. Accordingly, individuals formulate meanings themselves in the learning process (Applefield et al., 2000). They construct new information by associating the information obtained with the old information. In order for this association and construction to occur, individuals need to acknowledge that the new information is logical and that the existing information is insufficient for the solution of the problem. Contrary to the behaviouristic approaches which see individuals as a tabula rasa to be filled (Locke, 1975), constructivist learning theory states that the individual does not start to acquire knowledge with an empty mind, but the mind of the individual who encounters new information becomes active. Thus, the individual associates the new information with their pre-existing experiences and knowledge.

In terms of intercultural communication competence of language learners, it is crucial to acquire language skills as well as intercultural skills such as knowledge, awareness, attitudes, skills, and proficiency regarding intercultural communication. Accordingly, students formulate new information based on their previous experiences. As they believe that the new information is related, their chance of language achievement will increase (Mvududu and Thiel-Burgess, 2012). Technological tools can be a solution to the problem of acquiring new information related to intercultural communication only through coursebooks or teachers. In this way, learners can acquire the knowledge and skills related to intercultural communication free from the boundaries of traditional classrooms and coursebooks.

### 2.1.6. Social Constructivism

Russian psychologist Lev Vygotsky (1978) emphasized the importance of the social environment in learning. He claimed that children begin to learn from others in socially constructed environments. The social environment constitutes a basis for attitudes, beliefs, ideas, skills, and learning activities. That is, social factors have a more important role in learning compared to psychological factors (Lantolf, 2000). Contrary to cognitive psychologists, who acknowledge cognitive development as an internal action, Vygotsky (1978) asserts that all cognitive processes start with social interactions among individuals. He put a special emphasis on language and culture. Accordingly, all mental processes develop with the social interactions which have been shaped by our culture and therefore learning occurs as a result of culturally organized psychological actions.

According to Vygotsky (1962), human interaction needs to be mediated in order to be effective. In other words, individuals use mediated tools such as language to develop cognitively internalizing sociocultural codes embedded within these. In this theory, it is emphasized that adults have a prominent role in the cognitive development of a child. When adults, i.e. "*more knowledgeable others"*, work collaboratively with children, their cognitive development is positively affected. Therefore, children may internalize what they learn and become more successful problem solvers. When they encounter a similar problem in a different situation, they can easily deal with the problem. Accordingly, individuals should be encouraged to be independent problem solvers. However, the potential developmental

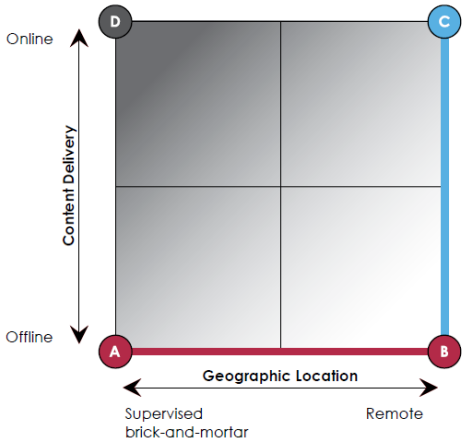
level to which an individual can reach should be well-determined in order not to create confusion. This potential developmental level is called as "*zone of proximal development"* (Vygostsky, 1978). Accordingly, teaching is meaningful to the extent that it advances the cognitive development. An effective teaching should promote the effective use of "*the zone of the proximal development*". For this reason, teaching environments in which social interaction between students and more knowledgeable others occurs have an important role in cognitive development. In terms of education, it is possible to summarize the social constructivist framework as follows; (1) education is not only a basis for cognitive development, but also a sociocultural activity, (2) schools and teachers should not leave learners fully independent in their studies since excessive independence slows cognitive development, (3) learners' cognitive development improves when they work collaboratively with more knowledgeable others, (4) the more knowledgeable other should be familiar with the learners' ZPD well in order to help them internalize the information, and (5) more knowledgeable others may control learners' thinking and problem-solving activities. However, this control should enable learners to internalize what they have learned and make them independent thinkers and problem solvers. Considering those features mentioned above, blended activities utilizing technological tools can be an asset for developing the intercultural communication skills of learners.

### 2.1.7. Blended Learning

Blended learning is an actual approach which makes learning to become more independent of time and place limitations of traditional classrooms (Shebansky, 2018). Despite the substantial number of research in the literature regarding the blended learning approach, its actual meaning is still a matter of debate (Hrastinski, 2019). Graham (2006) defines blended learning as "*the combination of instruction from two separate systems known as traditional face-to-face instruction and distributed computer-mediated (CM) instruction*" (p.5). Allan (2007) explains that blended learning is a combination of traditional face-to-face classrooms and online learning opportunities. She also says that blended learning involves the use of various online tools such as discussion groups, chat opportunities, podcasts, etc. to strengthen traditional classrooms. In addition, Garrison and Vaughan (2008) state that blended learning integrates advantageous parts of traditional

classrooms and distance learning. It is based on the strengths of both approaches and supports learning in an effective way.

There are several models which are used to design blended classrooms. According to Sharpe et al (2006), while designing blended classrooms, teachers can blend *time*, i.e. synchronous or asynchronous activities, *physical environment*, i.e. classroom or home, *various information and communication technologies*, i.e. wikis, blogs, or discussion groups, *learner types*, i.e. social or introvert, *context*, i.e. academic or vocational, *pedagogy*, i.e. collaborative or autonomous learning, and *focus*, i.e. learning outcomes. Graham (2006) states that blending can be at the *activity level* which means designing activities involving not only traditional classroom settings but also computer-based features, can be at the *course level* that refers to the mixture of traditional and online courses, can be at the program level in which learners are free to choose the desired programs, and can be at the institution level that includes participant freedom to take fully online courses. Driscoll (2002) states that blended learning occurs by mixing web-oriented technologies, pedagogical approaches, instructional technologies, and authentic tasks. One of the most prominent classifications regarding the blended learning models belongs to Staker (2011). In the matrix below, while the horizontal axis shows the location where the learning takes place, the vertical axis shows the way through which the content is delivered.




| Point | Blended? | Example of program |
|---|---|---|
| A | No | Traditional brick-and-mortar school |
| B | No | Home school without online delivery |
| C | Maybe | Purely virtual school (also called cyber school and e-school). It only figures into blended learning if a student uses it to self-blend with a traditional campus. |
| D | Yes | Theoretical pure-play for blended learning (100% online and 100% supervised brick-and-mortar) |
| | Yes | Student learns through a mix of online/offline and supervised brick-and-mortar/remote |

Figure 8. Blended Learning Matrix (Staker, 2011)

According to this classification, the *face-to-face driver model* includes the active management of teachers using traditional classroom settings. Online learning can be used to support or correct learning. In the *rotation model*, students circulate on a fixed program between online and traditional environments. The online part can be carried out distantly from the school or inside the school. The teacher has a monitoring role in the online part. The third model is the *flex model* in which most of the contents are delivered via an online tool. Teachers appear only when it is necessary to support learners. The *online lab model* uses online platforms to carry out the course in traditional classroom laboratories. In the model, teachers who work online provide support and respond to students' questions. In the *self-blend model*, students take online courses to strengthen their school programs. The online courses in the model are always carried out distantly. Finally, the *online driver model* includes working distantly for most of the time through an online platform and teachers that bring all the materials and planning. Face-to-face meetings may be needed to check the progress. The models are presented in Table 1 below.

Table 1

Blended learning models (Staker, 2011)

| *Model* | *Scheduling* | *Teachers' role* | *Physical space* | *Delivery method* |
|---|---|---|---|---|
| ***Face-to-face Driver*** | Flexible | Crucial | Classroom or technology lab | Face-to-face teachers |
| ***Rotation*** | Fixed | Monitoring the process | Self-paced online environment and traditional classroom | Online tools and face-to-face teachers |
| ***Flex*** | Flexible | Minimal on site support | Distant | Online tools |
| ***Online Lab*** | Fixed | Supervising | Computer Lab | Online tools |
| ***Self-blend*** | Flexible | Minimal | Distant | Online tools |
| ***Online Driver*** | Flexible | Active | Distant and brick-and-mortar | Online tools and face-to-face teachers |

Blended learning has become one of the leading instructional methods since it gives flexibility in terms of time and place of learning (Rasheed et al., 2020). Dziuban et al. (2005) claim that blended learning environments can foster communication between learners through asynchronous and synchronous opportunities. Blended learning may be used to promote intercultural communication since it enables teachers to use several approaches in a flexible manner. That is, teachers can freely choose the delivery method according to the needs of their learners. They may choose between face-to-face or e-learning, use different tools such as videos, podcasts, or texts, prefer alternative learning approaches, use alternative assessment methods, and use alternative approaches for communication (Allan, 2007). Because learners have limited opportunities to interact with individuals from different cultures, courses designed based on blended learning models are useful to communicate interculturally. It is different from distance learning which may evoke the feeling of isolation. Through blended learning, learners may communicate with individuals living in distant regions under the guidance of teachers. Teachers prefer blended learning as it is cost-efficient, foster participation, increases engagement, and brings long distances closer, which promotes intercultural communication.

## 2.2. Research related to ICC and Blended Learning

Technology has become a prominent actor in language teaching in recent times (Aydin, 2018; O'Dowd, 2011; Çiftçi and Savaş, 2018). Intercultural communication is a broad concept that includes areas such as language education, business, healthcare, and tourism (Shadiev and Dang, 2022). However, our focus will be on intercultural communication within the scope of language education and blended learning. There is a substantial number of studies on this subject (Zhang and Zhou, 2022). We will investigate the studies which were published in some of the most respected journals which are indexed in the Social Sciences Citation Index (SSCI), Scopus, ERIC (Education Resources Information Center), or British Education Index (BEI). Accordingly, articles were examined based on their topic of interest and findings.

There are a number of studies investigating the relationship between telecollaboration projects and intercultural competence. For instance, Luo and Gao (2022) conducted a study to investigate the effects of a Chinese-American telecollaborative song-sharing project on WeChat application which lasted a semestre. In this study, similar themed songs in the native languages of the participants were shared with the others and culturally pertinent topics were discussed. The data were collected with qualitative data collection techniques. The results of the study indicated that students increased their cultural and intercultural knowledge, became more interested in the way of life of others, and gained more sophisticated perspective adoption skills. In another study carried out by Lázár (2015), the development of EFL learners' intercultural communicative competence during a web collaboration project was investigated. The participants were 10th or 11th- grade intermediate level English learners from Bulgaria, Hungary, Italia, and Türkiye. The interaction occurred through Moodle. The data were collected via qualitative techniques. According to the results of the study which lasted for five months, noteworthy improvement was observed in terms of intercultural communicative competence. In a comparative study, Porto (2016) investigated the outcomes of an online intercultural exchange program. The participants were primary school students from Denmark and Argentina. Data were collected from various sources such as Skype conversations, wiki chats, discussions held in classes, interviews, posters, videos, songs, drawings of students, reflections, and autobiographies.

The results of that qualitative study demonstrated that students developed an international group identity apart from their own national identities and highlighted the importance of the ecological citizenship concept. Shadiev and Huang (2019) carried out a study to investigate the effectiveness of a computerized translation system, *speech-enabled language translation (SELT) technology,* on intercultural understanding and sensitivity levels. Twenty-one university students from Taiwan, Burkina Faso, India, Indonesia, Vietnam, Paraguay, Panama, Honduras, Mexico, Belize, Mongolia, Philippines, and Uzbekistan participated in the study. The results indicated an increase in intercultural learning and sensitivity levels of the participants. Liaw (2019) examined the effects of open social Virtual Reality (VR) on the intercultural communication skills of EFL learners. The data of the study were collected with oral reports, surveys, and video recordings. The results showed that although participants were not secure about the effectiveness of the interactions with their peers, they highly appreciated the intercultural interactions through VR. Oakley et al. (2018) investigated a digital story exchange project conducted between middle school students in Australia and China. The participants were 13-14 years old Australian and Chinese students. A total of 151 students participated in the study. The data were collected mainly with qualitative techniques. The results demonstrated a considerable increase in the twenty-first-century and intercultural skills of the participants. Clavel-Arroitia (2019) conducted a study to analyze a corpus that consisted of 12 telecollaborative intercultural conversations. The interactions occurred between secondary-level British and Spanish students within the scope of a project funded by the European Commission. The purpose of this study was to investigate the concept of negotiation of meaning used by participants during these encounters. The data were collected with qualitative techniques and analysis of video interactions. Accordingly, the results indicated that the students improved their cultural and intercultural competence skills. Additionally, participants were seen to increase their negotiation of meaning skills which are important to deal with communication breakdowns. Lomicka and Ducate (2021) conducted a study to investigate the influence of technology, noticing, and reflection to foster intercultural learning during a short-term study abroad experience. Ten French and eight German university students took part in the study. The students use Padlet to post their experiences. According to the results obtained with open coding, it was found that students gained more awareness of their surroundings and linguistic landscapes which include the awareness of public signs language such as traffic signs, billboards, and street names and improved their cultural awareness levels. Finally,

Kusumaningputri and Widodo (2018) carried out a study to examine the effectiveness of intercultural activities based on digital photography. A total of sixty-six students participated in the study on a voluntary base. The data were collected with students' productions, observations, discussions, and field notes and analyzed in a qualitative manner. The results demonstrated that photography-oriented intercultural activities helped to promote critical cultural awareness and intercultural communicative competences of learners.

There are many studies focusing on the effectiveness of web tools on both intercultural communication and language skills of learners (Chen and Yang, 2016; Özdemir, 2017; Cunningham, 2019). For instance, Yang (2018) conducted a study to examine the use of questions in an intercultural online telecollaborative project. There were twelve participants between the ages of 18 and 22, six from China and six from the U.S. The project lasted for six weeks. According to the results of the study, the participants produced higher-order thinking questions during intercultural encounters, and improvements were observed in terms of their cross-cultural understanding and language skills. In an action study, Luo and Gui (2021) investigated students' perceptions and problems encountered during a Chinese-American telecollaborative exchange project. The data of this study were collected from various sources such as WeChat discussions, Skype conversations, interviews, reflections, journals, and an end-of-semester questionnaire. The results showed that more competent learners benefitted from the program and that highlighted the pedagogic potential of using telecollaboration for language learning. On the other hand, the study highlighted the challenges encountered during the study such as technical problems related to the internet connection, the language gap among participants, intense workload for both teachers and participants, and superficial discussions held on WeChat software. Angelova and Zhao (2016) conducted a study to investigate the use of web tools to promote language and intercultural skills. The participants were twenty-three American and twenty-six Chinese students. The project included interactions through Skype connections, discussion boards, and email exchanges. The qualitative analysis of the results of the students' essays, interviews, and posts demonstrated that students improved their intercultural awareness levels and language skills. Lee and Song (2020) carried out a study to examine the effect of group composition and task design on the intercultural communicative competence of learners based on the interactions that occurred on mobile tools. Twenty-seven Korean and twenty-seven American students participated in the study. They completed their tasks and

communicated with others through their smartphones. The project lasted for eight weeks. The data were collected with quantitative and qualitative data collection techniques and analyzed accordingly. The results of that mixed methods study revealed that intercultural interactions affected the quality of interactions in a positive way. Additionally, the interactions helped to develop a more intimate relationship among group members. In a study, Chen and Yang (2016) examined the usefulness of a telecollaborative project called United Beyond Our Diversity (UBOD) in terms of linguistic and intercultural skills development. The participants were thirty Taiwanese seventh-grade students who studied English as a foreign language for at least four years. The students interacted with peers who were from five different countries, Canada, Taiwan, the Netherlands, Lebanon, and, Ghana, via Moodle and Wiki platforms. The study used a mixed-methods design and data were collected through qualitative and quantitive sources. The obtained results showed that the UBOD project significantly affected students' linguistic skills and intercultural awareness levels. In a qualitative study, Wang (2020) investigated to what extent reading intercultural literature books and communicating with literature teachers from the U.S. affect Chinese students' linguistic skills and intercultural understandings. The selected readings belonged to authors from Greece, South Africa, Egypt, and the United States. The genres included argumentative writing, short stories, festivals, love, fairy tales, etc. After students read the books, they made small group discussions, wrote reflections, created video clips, and prepared presentations. According to the results of the study, it was found that students increased their cultural knowledge, developed their intercultural awareness, and improved their language skills. Jung et al. (2019) conducted a study to examine language learners' perceptions of technology in terms of promoting intercultural competence. A total of fifty-five students took part in the study. The participants were from Japan, Korean, and Taiwanese students who joined a one-semestre-long online class. Data were collected from many sources such as questionnaires, interviews, and transcription of conversations. The results demonstrated that the use of instructional technology may develop students' linguistic skills and intercultural communicative competence, and students had mostly positive perceptions of synchronous computer-mediated communication. Finally, Lee and Park (2017) examined the factors affecting the success of online interactions among Korean, American, and Australian students. A survey was conducted with a total of 236 Korean students who finished an online program that lasted one-semestre. The results indicated that

students' self-efficacy, the exchange infrastructure, and the quality of exchange activities significantly affected students' intercultural and linguistic skills.

# CHAPTER III

# METHODOLOGY

## 3.1. Introduction

The following section includes the methodological information used to obtain and analyze data regarding the influence of blended intercultural instruction on EFL learners' intercultural communicative awareness, anxiety, and sensitivity levels. To accomplish, information about the research design, settings, and participants is given first. Following that, information about data collection instruments and procedures is presented. Finally, information about data analysis is discussed in detail.

## 3.2. Research Design

This study aims to investigate the influence of blended instruction that was formed according to the ICC model on the intercultural communicative awareness, anxiety, and sensitivity levels of EFL learners and to deeply examine the thoughts, ideas, and attitudes of EFL learners towards blended intercultural instruction. Accordingly, mixed-method research was preferred to thoroughly investigate the research questions.

For many years, two dominant approaches remained at the forefront of language research. Scholars who searched for correlations or causal relationships between variables followed the experimental tradition that includes quantitative data collection and analysis techniques, while others who were more actively engaged in narration, description, and interpretation preferred the qualitative tradition. Although both approaches have some strengths and weaknesses, there is no certain superiority of one approach over the other. The research question is the key here which directs the researcher to what type of data will be collected and how they will be analyzed (Nunan and Bailey, 2009). Lately, the use of mixed-methods research which means collecting and analyzing data, and making deductions by utilizing qualitative and quantitative methods in a particular study (Tashakkori and Creswell, 2007; Halcomb and Hickman, 2015) has become widespread. That is, mixed-methods research has been accepted as the third methodology in social research (Doyle et al., 2009).

The mixed-methods research offers an alternative approach to the traditional qualitative and quantitative methods (Halcomb and Hickman, 2015). In literature, various terms have been used to refer the mixed methods research (Dörnyei, 2007; Mackey and Gass, 2015). For instance, multi-method research, multi-trait research, combined research, multimethodological research, integrated research, and mixed-model studies are commonly used terms to denote mixed-methods research.

There are several forms associated with mixed-methods research. According to the classification of Johnson et al (2014), the first type of mixed-methods research is *qualitatively driven mixed research* where the research questions are mainly discussed through the eyes of the qualitative research paradigm and quantitative data and analyses are chiefly used for supportive purposes. In this type of research, although quantitative data collection and analysis are used, the use of qualitative research is favored. The second type *is quantitatively driven mixed research* which tries to find answers to the research questions using a postpositivist perspective by utilizing qualitative techniques. In that type of research, while the quantitative data collection and analysis methods are emphasized, qualitative techniques are concurrently utilized at certain points to support the research. The third form of mixed-methods research is *equal-status mixed research*. As understood from the name, this form promotes the use of quantitative and qualitative techniques equally and concurrently. In this type of research, there is no favored approach and both approaches are used equally. Although the term mixed-methods research is relatively new, the distinction made by Grotjahn (1987) which is seen in Figure 9 can also be considered as a classification of mixed-methods research. The final and most comprehensive categorization belongs to Dörnyei (2007). The first type is *the questionnaire survey with follow-up interview or retrospection (QUAN→qual)* which suggests the collection of a great deal of data as quickly as possible and compensates for the gap by adding a large amount of qualitative data. *The second type is the questionnaire survey facilitated by the preceding interview (qual→QUAN)*. In this type, prior to constructing a full-scale questionnaire survey, a small-scale exploratory study including various types of interviews is implemented to focalize the issue. The third type is the *interview study with a follow-up questionnaire survey (QUAL→quan)*. In this type, an interview study that is qualitative in nature is mixed with a follow-up questionnaire to help reach a wider population. The fourth type of mixed methods research is the *interview study facilitated by a preceding questionnaire survey*

*(quan→QUAL)* in which an initial questionnaire is used to select participants for the following qualitative procedure, which can be quite problematic in qualitative research. The fifth type is *the concurrent combinations of qualitative and quantitative research (QUAL→quan+QUAN→quaL)* in which the two methods are used simultaneously. The aim of using a concurrent combination is to eliminate the weaknesses of one method and take advantage of the other at the same time. The sixth type is *the experiments with parallel interviews (QUAN+qual)* in which certain experiments are developed through conducting one-to-one or focus group interviews to deeply investigate the viewpoints of participants. The seventh type of mixed-methods research is *the longitudinal study with mixed methods components (QUAN+ QUAL)* in which a longitudinal study utilizes qualitative and quantitative methods to be able to comprehend the issue. The final type is *combining the self-report and observational data (QUAL+ QUAN).* In that type, the issue is investigated via self-reports such as interviews or questionnaires and external observations.

| | *Form of Data* | | *Method of Analysis* | | *Manner of Data Collection* | |
|---|---|---|---|---|---|---|
| *Type of Research* | *Quantitative* | *Qualitative* | *Statistical* | *Interpretative* | *Experimental/ Quasi-Experimental* | *Nonexperimental* |
| Experimental-qualitative-interpretative | | ✓ | | ✓ | ✓ | |
| Experimental-qualitative-statistical | | ✓ | ✓ | | ✓ | |
| Experimental-quantitative-interpretative | ✓ | | | ✓ | ✓ | |
| Exploratory-qualitative-statistical | | ✓ | ✓ | | | ✓ |
| Exploratory-quantitative-statistical | ✓ | | ✓ | | | ✓ |
| Exploratory-quantitative-interpretative | ✓ | | | ✓ | | ✓ |

Figure 9. Mixed-methods research typology of Grotjahn (1987)

There are certain strengths and weaknesses of using mixed-methods research. According to Mason (2006), mixed-methods research is used to enlighten the issue further, to seek answers to the research questions by using different approaches and viewpoints, to ask more detailed questions which correspond to distinctive points, to evaluate the accuracy of evidence which refers to triangulation (Denzin, 2012), to ask contradictory questions that are related to the scope of the research, and to direct the problem to decide which approach should be used. Bryman (2006) asserted that using mixed methods research yields greater validity, compensates for the weaknesses, gives more complete results, focuses more on the process, addresses different research questions, provides better explanations, yields

surprising results, forms various instruments, helps to sample, gives more credible results, provides a clearer image of the context, illustrates the data more comprehensively, provides usability, generates and tests hypotheses, widens the viewpoints, and helps to improve the data using other sources of data. According to Dörnyei (2007), using mixed-method helps to build up strengths and overcome weaknesses, investigate the issue with a multi-layer analysis, improve validity through triangulation, and attain a larger audience. However, he claims that some weaknesses should be eliminated. The most important weakness is the tendency of focusing on the sum and ignoring the constituents. That is, one should not fall into thinking that the result is more important than the process. The other weakness is the question of training. The competency of a researcher in using qualitative and quantitative methods is a matter of debate which is needed to be explored in detail. The final weakness is the relatively large number of possible combinations. Researchers may be confused and feel lost in the existence of a large quantity of typology. To sum up, the fundamental aim of using a mixed-methods design is to balance the weaknesses and strengths of the various research designs and find the best possible way to investigate the issue.

Within this scope, this study utilizes a quantitatively driven mixed methods design, whose aim is to seek solutions to the research questions using the quantitative paradigm and support the findings through qualitative data collection and analysis techniques. In this way, we aimed not only to explore cause and effect relationships in a quantitative manner but also to gain a deeper comprehension regarding the nature of the problem through qualitative techniques. This mixed-methods study has two main stages: (1) the development of the Intercultural Communication Anxiety and Intercultural Communicative Awareness Scales and (2) the main study. The scale development procedure consists of two steps. The first is the pilot study of the scales and the second is the development of the scales. The main study, on the other hand, consists of the following stages. (1) Piloting of the main study, (2) administration of ICANS, ICAWS, and ISS as the pre-test, (3) implementation of the blended intercultural instruction, (4) administration of ICANS, ICAWS, and ISS as the post-test, and (5) conducting interviews. The scales were administered during the spring semestre of the 2020-21 academic year. The main study data were collected during the spring semestre of the 2022-23 academic year. In the main study, first, a background questionnaire interrogating participants' age, gender, FLE scores, and intercultural communication status, ICANS, ICAWS, and ISS were administered. Then, the students were randomly assigned as

online discussion and in-class discussion groups. After that, the instruction phase which lasted for five weeks started. Both groups took traditional in-class intercultural instruction. However, participants in the in-class discussion group made discussions in the classroom while participants in the online discussion group discussed the issues online with participants from other countries. After that, ICANS, ICAWS, and ISS were administered again as the post-test in order to investigate the difference between the pre-and post-test scores of the participants. Finally, interviews were conducted. The research framework of this study is shown below;

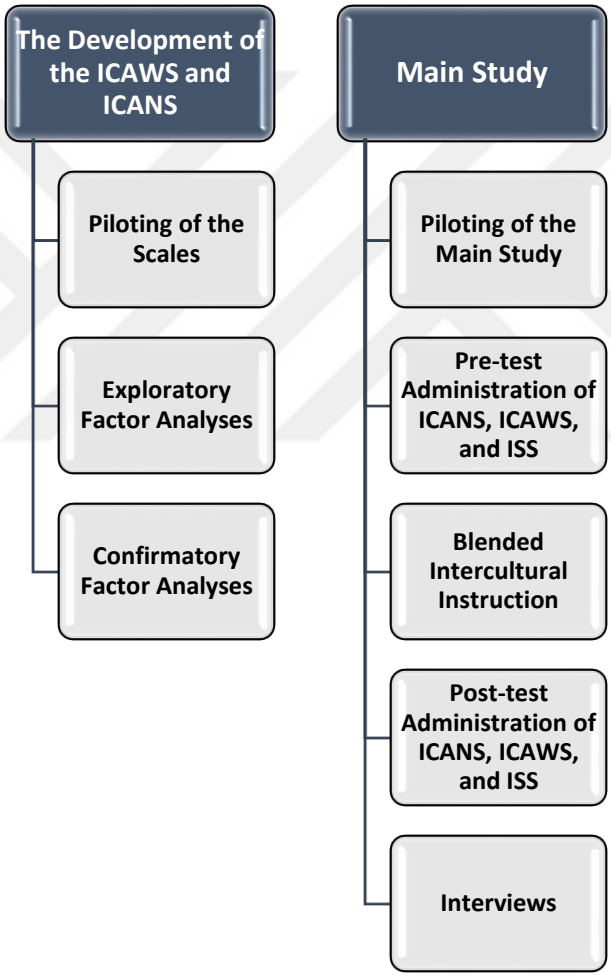



Figure 10. The general framework of the research design

### 3.3. Setting and Participants

Since the mixed design was preferred in the study, both quantitative and qualitative techniques were used. Prior to conducting the main study, two scales to be used in the main

study were developed. After this phase, the main study was conducted. In the following sections, participants of the piloting, scale development, and main study phases will be explained in detail.

### 3.3.1. Participants in the Pilot Studies of the Scales

The participants of the piloting phase of the scales were the second, third, and fourth-grade students studying at the department of English Language Teaching at Balıkesir University. The first-grade students were excluded as they would be the participants of the main study. The descriptive information regarding participants' age, gender, Foreign Language Exam (FLE) scores, and intercultural communication status is given below

Table 2

Descriptive information regarding the pilot study participants of the scales

| Variables | | Number | Percent | Mean | Minimum | Maximum | Total |
|---|---|---|---|---|---|---|---|
| **Age** | | | | 21.7 | 18 | 39 | 152 |
| **Gender** | **Female** | 105 | 69.1 | | | | 152 |
| | **Male** | 47 | 30.9 | | | | |
| **Grade** | **2nd** | 51 | 33.6 | | | | 152 |
| | **3rd** | 50 | 32.9 | | | | |
| | **4th** | 51 | 33.6 | | | | |
| **FLE Score** | | | | 67.5 | 57 | 78 | 152 |
| **Intercultural Experience** | **Yes** | 145 | 95.4 | | | | 152 |
| | **No** | 7 | 4.6 | | | | |

Table 2 shows that a total of 152 students participated in the study. The participants' mean age was 21.7 in the range of 18-39. While 105 (69.1%) participants were females, 47 (30.9%) were males. The reason why the number of female students is higher compared to male students is that it reflects the general tendency of ELT departments in Türkiye. To explain, female students have more tendency to study in the ELT departments of the universities in Türkiye. Regarding the grade, 51 participants were studying in the second grade, 50 were in the third grade, and 51 were in the fourth grade. FLE is an exam that is administered by OSYM and consists of 80 questions interrogating the academic English skills of the test takers. The mean FLE score was 67.5 in the range of 57-78. Finally, the participants were asked whether they ever had an intercultural experience. The participants

were informed that the concept of intercultural experience here means speaking English with a person from a different country. Accordingly, 145 (95.4%) of the participants expressed that they had an opportunity to speak English with a foreigner, whereas 7 (4.6%) participants did not have any intercultural experience.

### 3.3.2. Participants in the Scale Development Procedure

Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (DFA) techniques are commonly used in scale adaptation or development processes (Yaşlıoğlu, 2017). The scale development phase of this study consisted of two procedures. The first one is the exploratory factor analysis (EFA) and the second one is the confirmatory factor analysis (CFA). According to Schumacker and Lomax (2010), different data sets should be used for the EFA and CFA. The rationale behind using different data sets for the EFA and CFA is to demonstrate the validity of findings found as a result of EFA through CFA by using a different data set. The participants who were included in the Exploratory Factor Analysis were the first-, second-, third-, and fourth-grade students studying at the ELT departments in Canakkale Onsekiz Mart University, İstanbul Medeniyet University, and Samsun Ondokuz Mayıs University. The descriptive information regarding participants' age, gender, Foreign Language Exam scores, and intercultural communication status is presented below.

Table 3

Descriptive information regarding the participants in the EFA of the scales

| Variables | | Number | Percent | Mean | Minimum | Maximum | Total |
|---|---|---|---|---|---|---|---|
| **Age** | | | | 20.9 | 18 | 35 | 274 |
| **Gender** | **Female** | 188 | 68.6 | | | | 274 |
| | **Male** | 86 | 31.4 | | | | |
| **Grade** | **1st** | 85 | 31 | | | | 274 |
| | **2nd** | 78 | 28.5 | | | | |
| | **3rd** | 60 | 21.9 | | | | |
| | **4th** | 51 | 18.6 | | | | |
| **FLE Score** | | | | 71.3 | 55 | 79 | 274 |
| **Intercultural Experience** | **Yes** | 262 | 95.6 | | | | 274 |
| | **No** | 12 | 4.4 | | | | |

According to Table 3, the EFA studies of the ICAN and ICAW scales included 274 students studying at the ELT departments Canakkale Onsekiz Mart University, İstanbul Medeniyet University, and Samsun Ondokuz Mayıs University. The participants' mean age was 20.9 in the range of 18-35. Of 274 students, 188 (68.6%) were females and 86 (31.4%) were males. Similarly, this situation reflects the general tendency of ELT departments in Türkiye. Namely, female students tend to study in the ELT departments of universities in Türkiye. As for the grade levels, it is seen that 85 (31%) of the participants were studying in the first grade, 78 (28.5%) were in the second grade, 60 (21.9) were in the third grade, and 51 (18.6%) were in the fourth grade. Regarding FLE scores, the mean FLE of students was 71.3 in the range of 55-79. Considering the intercultural experience responses, 262 (95.6%) of the students stated that they interacted with a person from a different country in the English language, whereas 12 (4.4%) of the participants did not communicate.

The participants of the Confirmatory Factor Analysis were the first-, second-, third-, and fourth-grade students studying at the ELT departments Bursa Uludağ University, Erzurum Atatürk University, and Alanya Alaaddin Keykubat University. The descriptive information regarding participants' age, gender, Foreign Language Exam scores, and intercultural communication status is presented below.

Table 4

Descriptive information regarding the participants in the CFA of the scales

| Variables | | Number | Percent | Mean | Minimum | Maximum | Total |
|---|---|---|---|---|---|---|---|
| **Age** | | | | 21.2 | 18 | 32 | 228 |
| **Gender** | **Female** | 154 | 67.5 | | | | 228 |
| | **Male** | 74 | 32.5 | | | | |
| **Grade** | **1st** | 73 | 32 | | | | 228 |
| | **2nd** | 55 | 24.1 | | | | |
| | **3rd** | 70 | 30.7 | | | | |
| | **4th** | 30 | 13.2 | | | | |
| **FLE Score** | | | | 68 | 50 | 78 | 228 |
| **Intercultural Experience** | **Yes** | 217 | 95.2 | | | | 228 |
| | **No** | 11 | 4.8 | | | | |

Table 4 presents information regarding the participants who took part in the CFA studies of the ICAN and ICAW scales. A total of 228 individuals studying at the ELT departments of Bursa Uludağ University, Erzurum Atatürk University, and Alanya Alaaddin

Keykubat University participated in the CFA study of the scales. Accordingly, the mean age of the participants was 21.2 in the range of 18-32. While 154 (67.5%) of the participants were females, 74 (%32.5) were males. Again, this reflects the general tendency of ELT departments in Türkiye. Considering grades, it is observed that 73 (32%) of the participants were studying in the first grade, 55 (24.1%) were in the second grade, 70 (30.7%) were in the third grade, and 30 (13.2) were in the fourth grade. As for the FLE scores, the mean FLE scores of the participants were 68 in the range of 50-78. When the responses regarding intercultural communication encounters are examined, it is seen that 217 (95.2%) participants interacted with at least one foreign person in the English language, while 11 (4.8%) did not have any communication.

### 3.3.3. Participants of the Main Study

The participants of the main study were first-grade preservice ELT teachers who were studying at the English Language Teaching department of Balıkesir University in the spring semester of the 2022-23 academic year. The descriptive information regarding the main study participants is shown below.

Table 5

Descriptive information regarding the participants of the main study.

| Variables | | Number | Percent | Mean | Minimum | Maximum | Total |
|---|---|---|---|---|---|---|---|
| **Age** | | | | 19.2 | 18 | 29 | 56 |
| **Gender** | **Female** | 38 | 67.9 | | | | 56 |
| | **Male** | 18 | 32.1 | | | | |
| **FLE Score** | | | | 68.7 | 59 | 78 | 56 |
| **Intercultural Experience** | **Yes** | 51 | 91.1 | | | | 56 |
| | **No** | 5 | 8.9 | | | | |

According to the information given in Table 5, a total of 56 students participated in the main study that was conducted with the first-grade students at the English Language Teaching department of Balıkesir University in the spring semester of the 2022-23 academic year. As understood from the table, the mean age of the participants was 19.2 in the range of 18-29. 38 (67.9 %) of the participants were females, whereas 18 (32.1 %) were males. As for FLE scores, the mean FLE scores of the participants were 68.7 in the range of 59-78. Considering the responses regarding intercultural communication encounters, it is observed

that 51 (91.1 %) participants interacted with at least one foreign person in the English language, while 5 (8.9 %) did not have any communication.

### 3.4. Data Collection Tools

In the quantitative phase of the study, data were collected with three scales. (1) The Intercultural Communicative Anxiety Scale for EFL students developed by the researcher. (2) The Intercultural Communicative Awareness Scale for EFL students developed by the researcher and whose development procedure will be explained in the following sections. (3) The Intercultural Sensitivity Scale which was developed by (Chen and Starosta, 2000). The qualitative phase, on the other hand, included (1) semi-structured interviews.

#### 3.4.1. Development of the Intercultural Communicative Anxiety Scale for EFL Learners

In order to have a deeper knowledge of individuals, objects, phenomena, actions, and circumstances, various measurement techniques are used. Rating scales are widely used in social sciences. Although the term scale is used interchangeably with “questionnaires”, “inventories”, “tests”, “surveys”, and “forms” (Aiken, 1997), they have several differences (Dörnyei and Taguchi, 2010). Scales are measurement tools that are used to classify, rank, or determine the degree of the features subject to measurement. Likert-type scales are commonly used in social sciences. In those scales, participants rank qualities by marking to what extent they agree or disagree with the given item (Allen and Seaman, 2007).

Within the scope of this research, an item pool aiming to assess the intercultural anxiety levels of EFL learners was created by reviewing the literature. Eventually, 22 items interrogating the intercultural anxiety levels of EFL learners appeared. 5 experts were consulted to give opinions regarding content validity and linguistic understandability. As a result of the suggestions, necessary corrections were made and some of the items were removed or combined. Following that, we administered the scale to 15 individuals to assess its comprehensibility and feasibility. The 5-point Likert-type scale included *strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), and strongly agree (5)* options. As a result, the 20-item scale was administered to 152 participants, which is

consistent with the literature. The summary of the scale development procedure is given in Figure 11 below.

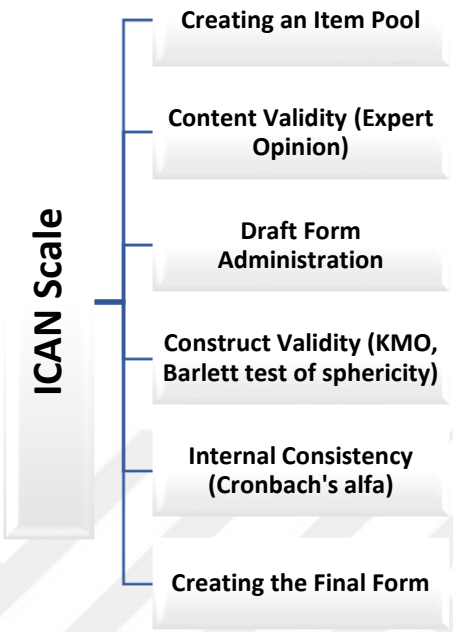



Figure 11. Scale development steps of ICAN

**Pilot Study of the Intercultural Communicative Anxiety Scale for EFL Learners**

Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity are used to assess the appropriateness of the sampling and the power of the relationship among variables (Bartlett, 1954; Kaiser, 1970). According to Hall et al. (2006), a Kaiser-Meyer-Olkin score higher than 0.80 is considered *meritorious,* a score between 0.70-0.79 is *middling,* a score between 0.60-0.69 is *mediocre,* a score between 0.50-0.59 is *miserable,* and a score lower than 0.50 is totally unacceptable. In addition, Bartlett's test of Sphericity score should be $\alpha<.05$ in order to correctly show the strength of the relationship among variables. In the literature, there has been no consensus regarding the exact sample size while developing a scale. For example, Büyüköztürk (2002) explained that in the literature the ideal sample size is between 100 and 200. Tabachnick and Fidell (2007) claimed that there should be at least 300 participants for factor analysis. However, the common opinion is that the sample size should be higher than the number of variables, the number of samples should be at least 50, and the number of ideal observations per statement is 1 to 5 (Yaşlıoğlu, 2017).

In the pilot study of the scale, prior to conducting EFA, Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphericity were administered to assess if the sample is enough for the factor analysis. The KMO value was found to be .89 which demonstrates that the sample size is enough for FA. Additionally, the results of Bartlett's test of Sphericity indicated that the data set had a multivariate normal distribution ($\chi^2$=1860.69, p<0.01). The results regarding KMO and Bartlett's Test of Sphericity are presented in Table 6 below.

Table 6

Pilot study results of KMO and Barlett Test of Sphericity regarding the Intercultural Communicative Anxiety Scale for EFL learners

| **KMO and Bartlett's Test of Sphericity** | | |
|---|---|---|
| **Kaiser-Meyer-Olkin(KMO)** | | .888 |
| **Bartlett's Test of Sphericity** | **Approx. Chi-Square** | 1679.095 |
| | **df** | 153 |
| | **Sig.** | .000 |

In order to ensure the construct validity of the pilot scale, exploratory factor analysis was conducted to decide how many dimensions the scale had and what these dimensions were. As a result of the principal components analysis and the rotation with the Varimax technique, three factors with an eigenvalue greater than 1.00 emerged. The factors with less than 0.1 difference were not taken into consideration. The minimum loading for a factor was taken as .32 (Tabachnick and Fidell, 2007). A scree plot was performed to decide the number of factors to retain and is presented in Figure 12 below.

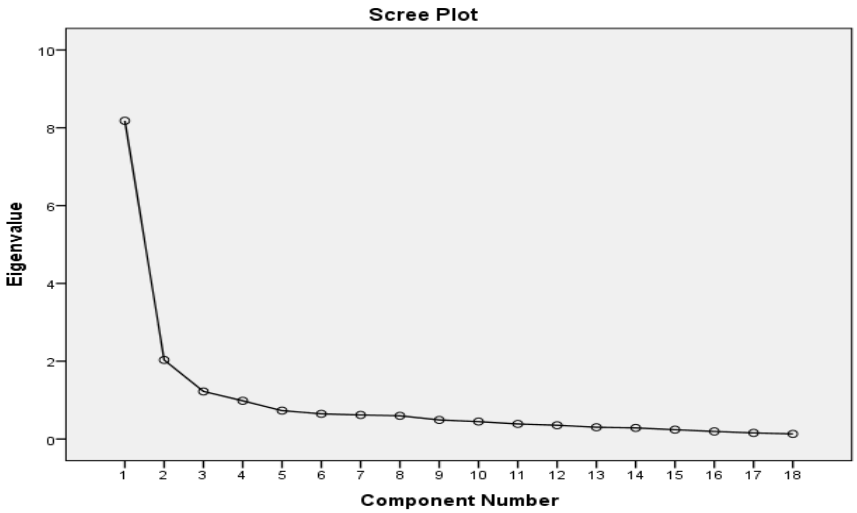



Figure 12. Scree plot for the pilot study of the Intercultural Communicative Anxiety Scale for EFL learners

In the "scree plot" above, the point where the curve drops rapidly is where the third factor is. After the third factor, it is seen that the curve proceeds in a relatively stable direction. The results of the EFA that was conducted on the SPSS Version 20 can be seen in Table 7 below.

Table 7

EFA Results of the Pilot Study of the Intercultural Communicative Anxiety Scale for EFL learners

| Rotated Component Matrix | | | | |
|---|---|---|---|---|
| **Items** | **Factor 1** | **Factor 2** | **Factor 3** | **Common Factor Variance** |
| **ICAN8** | **.84** | | | .73 |
| **ICAN7** | **.81** | | | .73 |
| **ICAN19** | **.79** | | | .65 |
| **ICAN6** | **.78** | | | .65 |
| **ICAN11** | **.70** | | | .75 |
| **ICAN12** | **.68** | | | .64 |
| **ICAN20** | **.68** | | | .63 |
| **ICAN13** | **.63** | | | .57 |
| **ICAN10** | **.55** | | | .60 |
| **ICAN9** | | **.74** | | .57 |
| **ICAN1** | | **.72** | | .63 |
| **ICAN2** | | **.72** | | .69 |
| **ICAN14** | | **.63** | | .55 |
| **ICAN18** | | **.62** | | .57 |
| **ICAN5** | | **.62** | | .46 |
| **ICAN17** | | **.55** | | .54 |
| **ICAN4** | | | **.79** | .67 |
| **ICAN3** | | | **.78** | .72 |

The results of EFA showed that 10 of the items were excluded as they did not have adequate factor loadings. Therefore, 18 items which were loaded in three factors remained in the scale. It is seen that the eigenvalue of the first factor that includes nine items was 8.18. It explained 45.45% of the total variance. The second factor included seven items. The eigenvalue of this factor was 2.03 and it explained 11.28% of the total variance. Finally, the eigenvalue of the third factor that consisted of two items was 1.22 and it explained 6.79% of the total variance. To sum up, a three-factor solution which explains 63.52% of the total variance is reached. Accordingly, it was concluded that the number of factors in the scale should remain at three.

Cronbach's Alfa coefficient was used to test the reliability of the scale. The Cronbach's alpha coefficient measures the internal consistency of the items. Accordingly, it can be interpreted that the items in the scale with a high Cronbach's alpha coefficient are

consistent with each other and consist of items measuring the same feature (Uzunsakal and Yıldız, 2018). A Cronbach's Alfa coefficient of >.9 is *excellent*, >.8 is *good*, >.7 is *acceptable*, >.6 is *questionable*, and >.5 is *poor*, while a score lower than .5 is considered totally *unacceptable* (George and Mallery, 2003). The internal consistency coefficients of the scale are presented in Table 8.

Table 8

Internal Consistency Coefficients of the pilot Intercultural Communicative Anxiety Scale for EFL learners

| **ICANSforEFL learners** | **Cronbach's Alfa Coefficient** |
|---|---|
| **Factor 1** | .93 |
| **Factor 2** | .83 |
| **Factor 3** | .77 |
| **Overall Consistency** | .93 |

As understood from Table 8, Cronbach's Alpha internal consistency coefficient of Factor 1 was found to be .93. It can be stated that this factor had an excellent level of consistency. The Cronbach's Alpha internal consistency coefficient of Factor 2 was .83. It can be stated that this level is good. The Cronbach's Alpha internal consistency coefficient of Factor 3 was found to be .77, which is acceptable. Finally, the overall Cronbach's Alpha internal consistency coefficient of the pilot scale was .93. Thus, the scale has excellent internal consistency and is highly reliable.

**Results regarding the Scale Development Procedure of the Intercultural Communicative Anxiety Scale for EFL Learners**

In the scale development process, first, the Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphericity were carried out to assess if the sample is adequate for the factor analysis. The KMO value was found to be .93 which indicates that the sample size is adequate for FA. Additionally, the results of Bartlett's test of Sphericity showed that the data set had a multivariate normal distribution ($\chi^2$=2221.51, p<0.01). The results regarding KMO and Bartlett's Test of Sphericity are demonstrated in Table 9 below.

Table 9

KMO and Barlett Test of Sphericity Results of the Intercultural Communicative Anxiety Scale for EFL learners

| KMO and Bartlett's Test of Sphericity | | |
|---|---|---|
| **Kaiser-Meyer-Olkin (KMO)** | | .925 |
| **Bartlett's Test of Sphericity** | **Approx. Chi-Square** | 2221.511 |
| | **df** | 120 |
| | **Sig.** | .000 |

In order to ensure the construct validity of the scale, exploratory factor analysis was conducted to determine how many dimensions the scale had and what these dimensions were. As a result of the principal components analysis and the rotation with the Varimax technique, three factors with an eigenvalue greater than 1.00 emerged. The factors with less than 0.1 difference were not taken into consideration. The minimum loading for a factor was taken as .32 (Tabachnick and Fidell, 2007). A scree plot was performed to decide the factors to be retained and is presented in Figure 13 below.

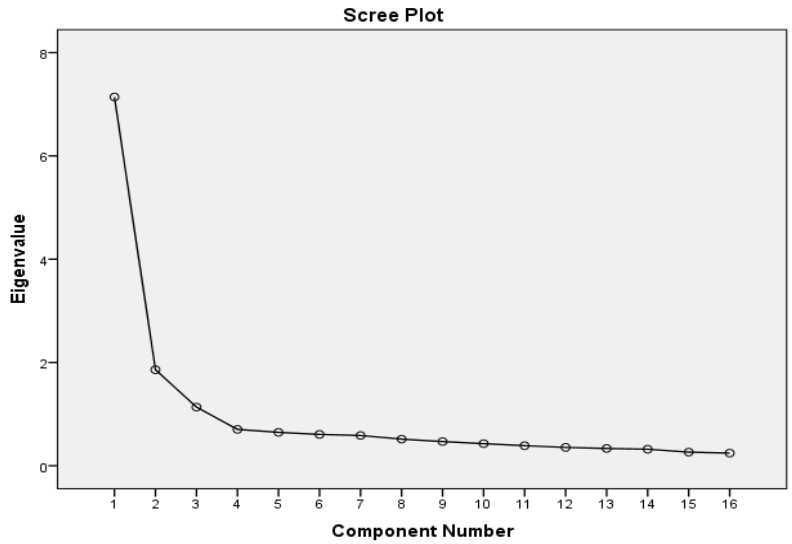



Figure 13. Scree plot for the Intercultural Communicative Anxiety Scale for EFL learners

In the "scree plot" above, the point where the curve drops rapidly is where the third factor is. After the third factor, it is seen that the curve proceeds in a relatively stable

direction. The results of the EFA performed on the SPSS Version 20 can be seen in Table 10 below.

Table 10

EFA Results of the Intercultural Communicative Anxiety Scale for EFL learners

| Rotated Component Matrix | | | | |
|---|---|---|---|---|
| **Items** | **Factor 1** | **Factor 2** | **Factor 3** | **Common Factor Variance** |
| **ICAN13** | **.80** | | | **.63** |
| **ICAN12** | **.76** | | | **.59** |
| **ICAN18** | **.74** | | | **.53** |
| **ICAN11** | **.72** | | | **.69** |
| **ICAN10** | **.67** | | | **.79** |
| **ICAN14** | **.62** | | | **.76** |
| **ICAN15** | **.62** | | | **.52** |
| **ICAN1** | | **.78** | | **.55** |
| **ICAN16** | | **.75** | | **.67** |
| **ICAN9** | | **.71** | | **.65** |
| **ICAN5** | | **.64** | | **.69** |
| **ICAN2** | | **.63** | | **.61** |
| **ICAN7** | | | **.84** | **.53** |
| **ICAN8** | | | **.83** | **.59** |
| **ICAN6** | | | **.73** | **.70** |
| **ICAN17** | | | **.64** | **.64** |

The results of the EFA indicated that 2 of the items were excluded as they did not have adequate factor loadings. Therefore 16 items which were loaded on three factors remained in the scale. It is seen that the eigenvalue of the first factor that includes 7 items was 7.11. It explained 44.63% of the total variance. The second factor consists of 5 items. The eigenvalue of this factor was 1.86 and it explained 11.62% of the total variance. The eigenvalue of the third factor that consisted of 4 items was 1.13 and it explained 7.10% of the total variance. Within this scope, a three-factor solution that explains 63.35% of the total variance was reached. Accordingly, it was concluded that the number of factors in the scale should be three.

Confirmatory Factor Analysis, which is frequently used in the development of scales, provides significant convenience. With CFA, the compatibility of the structure, whose existence has been proven before, is investigated in a new data set. CFA should be used to test the validity of the structure obtained after EFA in scale development studies (Worthington and Whittaker, 2006). CFA models are generally assessed with the interpretation of four fit indices together. That is to say, if the p-value of the chi-square test for a CFA model is higher than .05, the CFI value is higher than .95, and the RMSEA and SRMR values are lower than .06 and .08, respectively, this model indicates a good model-data fit (Hu and Bentler, 1999). According to Schermelleh-Engel-Moosbrugger (2003), the chi-square/df ratio should be < 2, p-value should be between 0.05 and 1, RMSEA and SRMR values should be <.05, NFI and GFI should be between 0.95 and 1, NNFI and CFI should be between 0.97 and 1, and AGFI and RFI should be between 0.90 and 1 for a model to have a perfect fit.

In order to have a better validity for the Intercultural Communicative Anxiety Scale for EFL learners, CFA was performed to see whether the results of EFA would overlap with the results to be obtained from CFA. The analysis showed that the results of CFA confirmed the results of EFA. To explain, the chi-square/df ratio was found to be 1.62 ($\chi^{2/}$/df=150.52/93), which shows that the model has a perfect fit since it is lower than 2. The GFI and AGFI were found to be .93 and .89 respectively, which shows that the model fit is within the acceptable range (Schermelleh-Engel-Moosbrugger, 2003). The CFI was found to be .97, which confirms that the model has a perfect fit. The NFI was found to be .92, which shows that the model fit is acceptable. Finally, the RMR and RMSEA values were found to be .053 and .052, which demonstrates that the model has an acceptable fit. Table 11 presents the results regarding the goodness of fit indices.

Table 11.

Goodness Fit Statistics regarding the Intercultural Communicative Anxiety Scale for EFL learners

| **Model Fit** | **Values** |
|---|---|
| $\chi^2$ | 150.52 |
| **df** | 93 |
| $\chi^2$**/df** | 1.62 |
| **GFI** | .93 |
| **AGFI** | .89 |
| **CFI** | .97 |
| **NFI** | .92 |
| **RMR** | .053 |
| **RMSEA** | .052 |

The findings obtained from CFA show that the model mostly had a good fit. That is to say, CFA is a measurement method that is used to assess the suitability of the factors found by EFA. Therefore, it can be said that the results were confirmed by the CFA analysis, and a scale that consists of 16 items that were loaded on 3 factors appeared. Figure 14 presents the path diagram of the Intercultural Communicative Anxiety Scale for EFL learners.

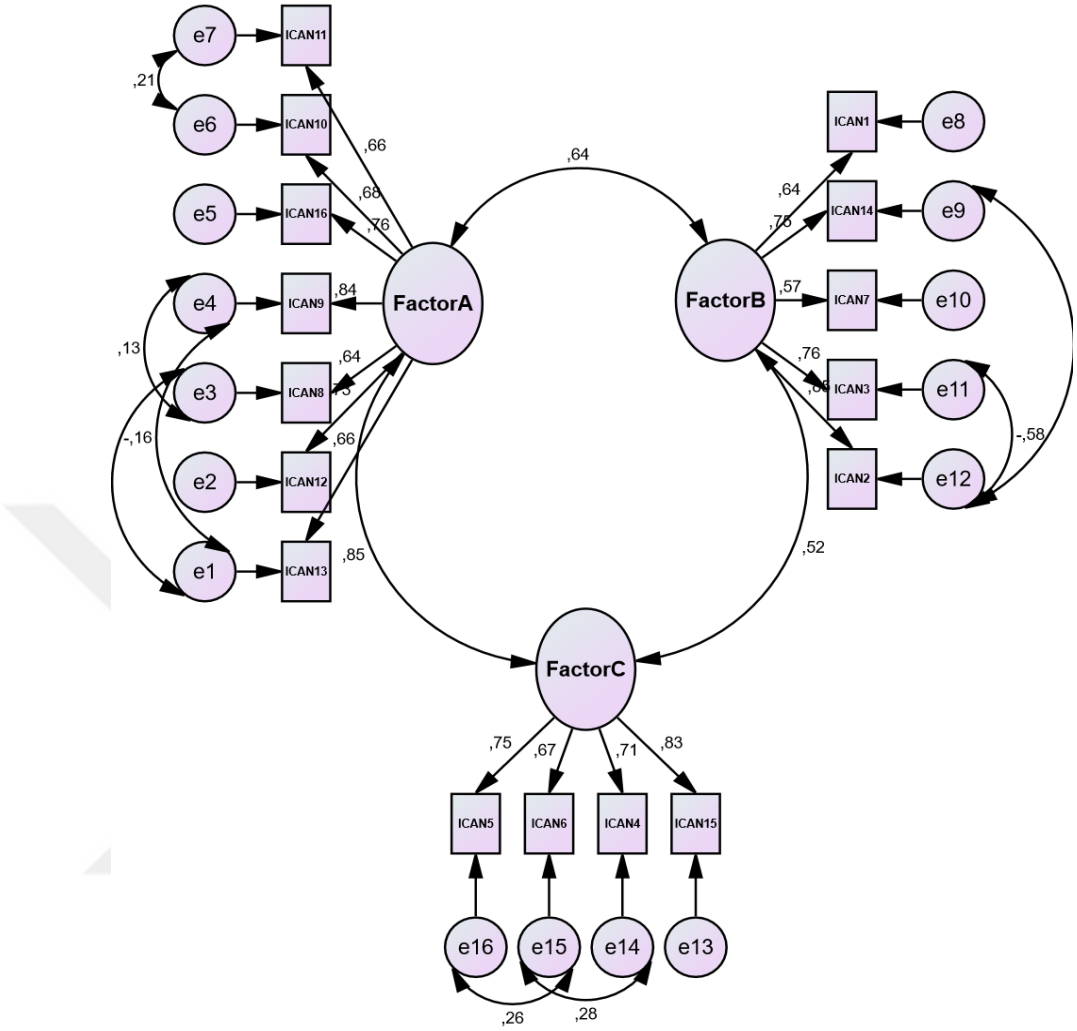



Figure 14. Path diagram of the Intercultural Communicative Anxiety Scale for EFL learners

When the CFA results presented in Figure 14 are considered, it is seen that the Intercultural Communication Anxiety model that includes 3 factors was acceptable. The factor loadings of the items that represent each factor were between .64-.85 for Factor 1, .65-.85 for Factor 2, and .71-.83 for Factor 3.

In the study, the reliability of the scale was assessed with the Cronbach's Alfa coefficient. The Cronbach's alpha coefficient, which is a measure of the internal consistency of the items, is used to explain or question the homogeneous structure of the items in the scale. The results are presented in Table 12.

Table 12

Internal Consistency Coefficients of the Intercultural Communicative Anxiety Scale for EFL learners

| **ICANSforEFL learners** | **Cronbach's Alfa Coefficient** |
|---|---|
| **Factor 1** | .89 |
| **Factor 2** | .79 |
| **Factor 3** | .87 |
| **Overall Consistency** | .92 |

As understood from Table 12, the Cronbach's Alpha coefficient of Factor 1 was .89. It can be stated that this factor had a good level of consistency. The Cronbach's Alpha coefficient of Factor 2 was .79. It can be stated that this level is acceptable. The Cronbach's Alpha coefficient of Factor 3 was found to be .87, which is a good level. Finally, the overall Cronbach's Alpha coefficient of the scale was .92. Therefore, it can be stated that the scale is consistent and highly reliable.

As a result of the scale development procedure, the Intercultural Communicative Anxiety Scale for EFL learners which included 16 items grouped into 3 factors appeared. Those factors were named "*Communicative Difficulty*" which consists of 7 items, "*Communicative Willingness*" which involves 5 items, and "*Communicative Uncertainty*" which includes 4 items. This Likert-type scale is responded as strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), and strongly agree (5). In the scale, items 8, 9, 10, 11, and 12, namely items under the communicative willingness construct are reverse coded. The maximum score to be obtained from the scale is 80. The higher scores indicate that the participants have higher intercultural communicative anxiety levels. The classification of the ICANS for EFL learners is shown in Table 13.

Table 13.

Classification of the Intercultural Communicative Anxiety Scale for EFL learners

| Construct | Item No | Statement |
|---|---|---|
| **Communicative Difficulty (Factor 1)** | **1** | I become confused while communicating with individuals from different cultures in the English language. |
| | **2** | I feel nervous and anxious while communicating with individuals from different cultures in the English language. |
| | **3** | I feel my heart beating faster while communicating with individuals from different cultures in the English language. |
| | **4** | I sweat while communicating with individuals from different cultures in the English language. |
| | **5** | I feel uncertain and unpleasant while communicating with individuals from different cultures in the English language. |
| | **6** | I have difficulty expressing my thoughts while communicating with individuals from different cultures in the English language. |
| | **7** | I feel embarrassed while communicating with individuals from different cultures in the English language. |
| **Communicative Willingness (Factor 2)** | **8** | I like talking with people from different cultures in the English language. |
| | **9** | I can easily communicate with people from different cultures in the English language. |
| | **10** | I am eager to participate in group discussions with people from different cultures in the English language. |
| | **11** | I look for opportunities to communicate with people from different cultures in the English language. |
| | **12** | I am keen on communicating with individuals from different cultures in the English language. |
| **Communicative Uncertainty (Factor 3)** | **13** | I feel anxious when I am not certain about what is happening during intercultural communication in the English language. |
| | **14** | I am concerned about what other people think about me during intercultural communication in the English language. |
| | **15** | I feel anxious when I am not sure about what other people say during intercultural communication in the English language. |
| | **16** | I am worried about causing misunderstandings while communicating with individuals from different cultures in the English language. |

### 3.4.2. Development of the Intercultural Communicative Awareness Scale for EFL Learners

An item pool aiming to assess the intercultural awareness levels of EFL learners was created by reviewing the literature. As a result, 24 items interrogating the intercultural anxiety levels of EFL learners were created. 5 experts were asked to assess the scale in terms of content validity and linguistic understandability of the scale. As a result of the suggestions, necessary corrections were made and some of the items were removed or combined. After that, we administered the scale to 15 individuals to assess its comprehensibility and feasibility. The 5 point Likert-type scale included *strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), and strongly agree (5)* options. As a result, the 22 item scale was administered to 152 participants, which is consistent with the literature.

### Pilot Study of the Intercultural Communicative Awareness Scale for EFL Learners

In the pilot study of the scale, prior to conducting EFA, Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphericity were conducted to assess whether the sample is adequate for the factor analysis. The KMO value was found to be .82 which displays that the sample size is enough for FA. Additionally, the results of Bartlett's test of Sphericity showed that the data set had a multivariate normal distribution ($\chi^2$=1275.66, p<0.01). The results regarding KMO and Bartlett's Test of Sphericity are presented in Table 14 below.

Table 14

Pilot study results of KMO and Barlett Test of Sphericity regarding the Intercultural Communicative Anxiety Scale for EFL learners

| **KMO and Bartlett's Test of Sphericity** | | |
|---|---|---|
| **Kaiser-Meyer-Olkin (KMO)** | | .820 |
| **Bartlett's Test of Sphericity** | **Approx. Chi-Square** | 1275.658 |
| | **df** | 171 |
| | **Sig.** | .000 |

In order to ensure the construct validity of the pilot scale, exploratory factor analysis was conducted to determine how many dimensions the scale had and what these dimensions were. As a result of the principal components analysis and the rotation with the Varimax technique, three factors with an eigenvalue greater than 1.00 emerged. The factors with less than 0.1 difference were not taken into consideration. The minimum loading for a factor was taken as .32 (Tabachnick and Fidell, 2007). A scree plot was performed to determine the number of factors to retain and is presented in Figure 15 below.

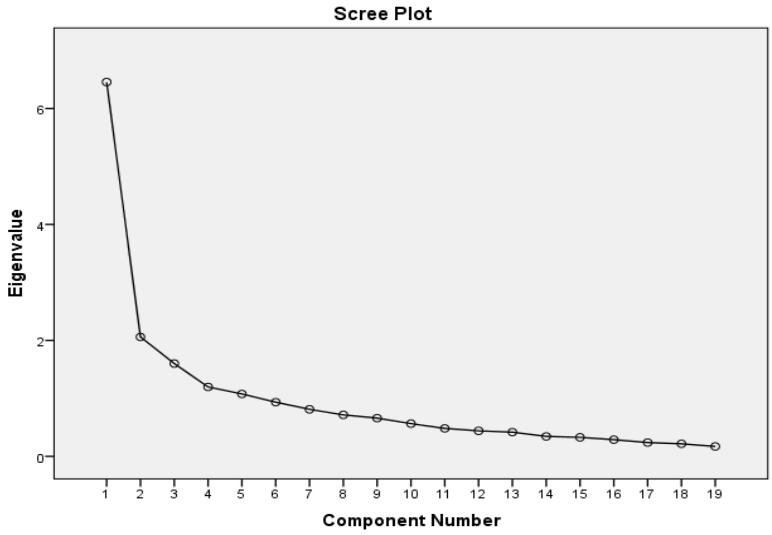



Figure 15. Scree plot for the pilot study of the Intercultural Communicative Awareness Scale for EFL learners

In the "scree plot" above, the point where the curve drops rapidly is where the third factor is. After the third factor, it is seen that the curve proceeds in a relatively stable direction. The results of the EFA that was conducted on the SPSS Version 20 can be seen in Table 15 below.

Table 15

EFA results of the pilot study of the Intercultural Communicative Awareness Scale for EFL learners

| Rotated Component Matrix | | | | |
|---|---|---|---|---|
| **Items** | **Factor 1** | **Factor 2** | **Factor 3** | **Common Factor Variance** |
| **ICAW17** | **.78** | | | **.63** |
| **ICAW19** | **.76** | | | **.62** |
| **ICAW18** | **.72** | | | **.55** |
| **ICAW20** | **.66** | | | **.64** |
| **ICAW13** | **.64** | | | **.56** |
| **ICAW16** | **.57** | | | **.56** |
| **ICAW11** | **.48** | | | **.25** |
| **ICAW7** | | **.74** | | **.62** |
| **ICAW14** | | **.74** | | **.65** |
| **ICAW10** | | **.71** | | **.60** |
| **ICAW6** | | **.64** | | **.58** |
| **ICAW15** | | **.63** | | **.58** |
| **ICAW1** | | **.57** | | **.36** |
| **ICAW9** | | **.55** | | **.44** |
| **ICAW4** | | | **.70** | **.66** |
| **ICAW8** | | | **.70** | **.55** |
| **ICAW3** | | | **.70** | **.53** |
| **ICAW5** | | | **.69** | **.54** |
| **ICAW2** | | | **.43** | **.22** |

As a result of the EFA, 13 of the items were excluded as they did not have adequate factor loadings. Therefore, 19 items that were loaded in three factors remained in the scale. It is seen that the eigenvalue of the first factor that includes seven items was 6.46. It explained 33.98% of the total variance. The second factor included seven items. The eigenvalue of this factor was 2.06 and it explained 10.84% of the total variance. Finally, the eigenvalue of the third factor that involves five items was 1.60 and it explained 8.43% of the total variance. To sum up, a three-factor solution which explains 53.24% of the total variance is reached. Accordingly, it was concluded that the number of factors in the scale should remain at three. Cronbach's Alfa coefficient was used to test the reliability of the scale. Accordingly, the internal consistency coefficients of the scale are presented in Table 16.

Table 16

Internal Consistency Coefficients of the pilot Intercultural Communicative Awareness Scale for EFL learners

| ICAWSforEFL learners | Cronbach's Alfa Coefficient |
|---|---|
| **Factor 1** | .84 |
| **Factor 2** | .82 |
| **Factor 3** | .73 |
| **Overall Consistency** | .90 |

As understood from Table 16, Cronbach's Alpha internal consistency coefficient of Factor 1 was found to be .84. It can be stated that this factor had a good level of consistency. The Cronbach's Alpha internal consistency coefficient of the Factor 2 was .82. It can be stated that this level is good. The Cronbach's Alpha internal consistency coefficient of Factor 3 was found to be .73, which is acceptable. Finally, the overall Cronbach's Alpha internal consistency coefficient of the pilot scale was .90. Therefore, it can be stated that the scale is consistent and highly reliable.

**Results regarding the Scale Development Procedure of the Intercultural Communicative Awareness Scale for EFL Learners**

In the scale development process, first, the Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphericity were carried out to assess if the sample is enough for the factor analysis. The KMO value was found to be .83 which indicates that the sample size is adequate for FA. Additionally, the results of Bartlett's test of Sphericity showed that the data set had a multivariate normal distribution ($\chi^2$=1055.887, p<0.01). The results regarding KMO and Bartlett's Test of Sphericity are presented in Table 17 below.

Table 17

KMO and Barlett Test of Sphericity results of the Intercultural Communicative Awareness Scale for EFL learners

| KMO and Bartlett's Test of Sphericity | | |
|---|---|---|
| Kaiser-Meyer-Olkin (KMO) | | .828 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1055.887 |
| | df | 120 |
| | Sig. | .000 |

In order to ensure the construct validity of the scale, exploratory factor analysis was conducted to decide how many dimensions the scale had and what these dimensions were. As a result of the principal components analysis and the rotation with the Varimax technique, four factors with an eigenvalue greater than 1.00 emerged. The factors with less than 0.1 difference were not taken into consideration. The minimum loading for a factor was taken as .32 (Tabachnick and Fidell, 2007). A scree plot was performed to decide the number of factors to retain and is presented in Figure 16 below.

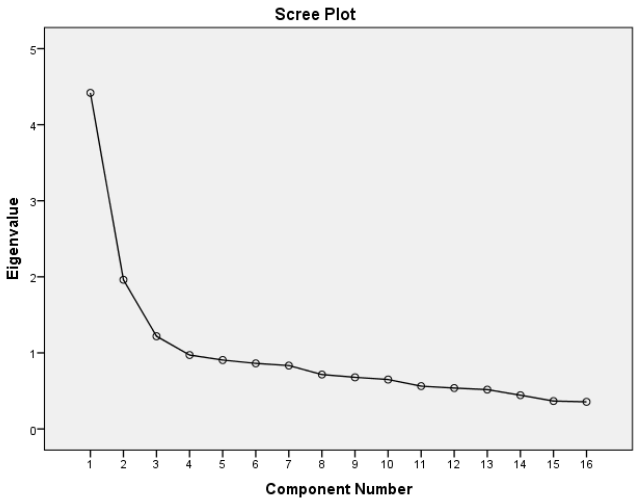



Figure 16. Scree plot for the Intercultural Communicative Awareness Scale for EFL learners

In the "scree plot" above, the point where the curve drops rapidly is where the third factor is. After the third factor, it is seen that the curve proceeds in a relatively stable

direction. The results of the EFA that was conducted on the SPSS Version 20 is given in Table 18 below.

Table 18

EFA results of the Intercultural Communicative Awareness Scale for EFL learners

| Rotated Component Matrix | | | | |
|---|---|---|---|---|
| **Items** | **Factor 1** | **Factor 2** | **Factor 3** | **Common Factor Variance** |
| **ICAW13** | **.74** | | | **.57** |
| **ICAW16** | **.71** | | | **.52** |
| **ICAW20** | **.64** | | | **.48** |
| **ICAW4** | **.61** | | | **.48** |
| **ICAW17** | **.61** | | | **.40** |
| **ICAW19** | **.60** | | | **.38** |
| **ICAW18** | **.57** | | | **.34** |
| **ICAW11** | **.54** | | | **.32** |
| **ICAW3** | **.34** | | | **.25** |
| **ICAW14** | | **.81** | | **.67** |
| **ICAW15** | | **.76** | | **.60** |
| **ICAW10** | | **.59** | | **.54** |
| **ICAW9** | | **.50** | | **.41** |
| **ICAW6** | | | **.77** | **.63** |
| **ICAW5** | | | **.62** | **.49** |
| **ICAW7** | | | **.62** | **.53** |

As a result of the EFA, 3 of the items were excluded as they did not have adequate factor loadings. Therefore, 16 items that were loaded on three factors remained in the scale. It is seen that the eigenvalue of the first factor that includes nine items was 4.42. It explained 27.62% of the total variance. The second factor included four items. The eigenvalue of this factor was 1.96 and it explained 12.26% of the total variance. Finally, the eigenvalue of the third factor consisting of three items was 1.22 and it explained 7.61% of the total variance. In conclusion, a three-factor solution which explains 47.49% of the total variance was reached. Accordingly, it was concluded that the number of factors in the scale should be three.

In order to have a better validity for the Intercultural Communicative Awareness Scale for EFL learners, CFA was performed to see whether the results of EFA would conform to the results to be obtained from CFA. As a result of the analysis, it is understood that the results of CFA confirmed the results of EFA. To explain, the chi-square/df ratio was found to be 1.16 ($\chi^{2/}$/df=111.38/96), which shows that the model has a perfect fit since it is lower than 2. The GFI and AGFI were found to be .94 and 92 respectively, which shows that the model fit is within the acceptable range (Schermelleh-Engel-Moosbrugger, 2003). The CFI was found to be .98, which indicates that the model has a perfect fit. The NFI was found to be .88, which shows that the model fit is acceptable. Finally, the RMR and RMSEA values were found to be .024 and .027, which demonstrates that the model has a perfect fit. Table 19 presents the results regarding the goodness of fit indices.

Table 19

Goodness Fit Statistics regarding the Intercultural Communicative Awareness Scale for EFL learners

| **Model Fit** | **Values** |
|---|---|
| **$\chi^2$** | 111.38 |
| **df** | 96 |
| **$\chi^2$/df** | 1.16 |
| **GFI** | .94 |
| **AGFI** | .92 |
| **CFI** | .98 |
| **NFI** | .88 |
| **RMR** | .024 |
| **RMSEA** | .027 |

The findings obtained from CFA show that the model mostly had a good fit. That is to say, CFA tests the suitability of the factors determined by EFA. Therefore, it can be said that the results were confirmed by the CFA analysis, and a scale that consists of 16 items that were loaded on three factors appeared. Figure 17 presents the path diagram of the Intercultural Communicative Awareness Scale for EFL learners.

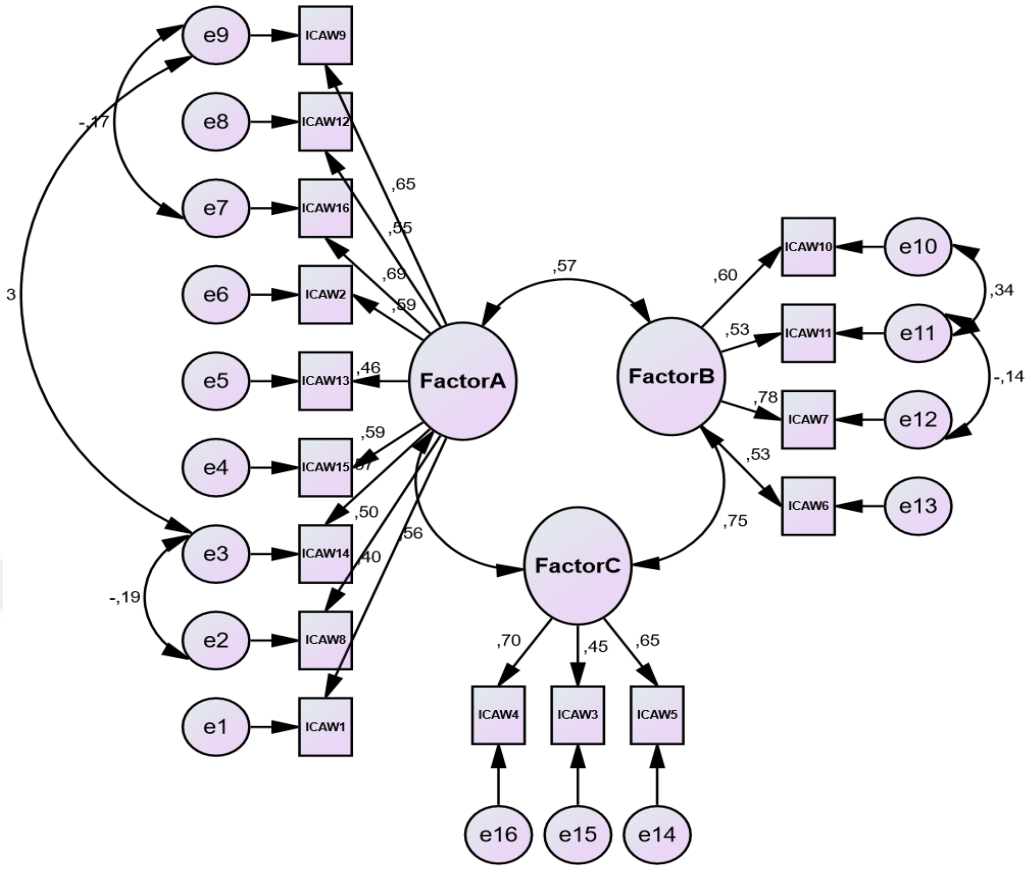



Figure 17. Path diagram of the Intercultural Communicative Awareness Scale for EFL learners

When the CFA results presented in Figure 17 are examined, it is seen that the Intercultural Communication Awareness model which includes three factors was acceptable. The factor loadings of the items that represent each dimension were between .40-69 for Factor 1, .53-.78 for Factor 2, and .45-.70 for Factor 3. The internal consistency coefficients of the scale are presented in Table 20.

Table 20

Internal Consistency Coefficients of the Intercultural Communicative Awareness Scale for EFL learners

| ICAWSforEFL learners | Cronbach's Alfa Coefficient |
|---|---|
| **Factor 1** | .79 |
| **Factor 2** | .73 |
| **Factor 3** | .63 |
| **Overall Consistency** | .84 |

As understood from Table 20, Cronbach's Alpha internal consistency coefficient of Factor 1 was found to be .79. It can be stated that this factor had a good level of consistency. The Cronbach's Alpha internal consistency coefficient of Factor 2 was .73. It can be stated that this level is good. The Cronbach's Alpha internal consistency coefficient of Factor 3 was found to be .63, which is acceptable. Finally, the overall Cronbach's Alpha internal consistency coefficient of the scale was .84. Therefore, it can be stated that the scale is consistent and reliable.

As a result of the scale development procedure, the Intercultural Communicative Awareness Scale for EFL learners which includes 16 items grouped into 3 factors was created. Those factors were named "*Basic Cultural Awareness*" which consists of 9 items, "*Advanced Cultural Awareness*" which involves 5 items, and "*Intercultural Awareness*" which includes 4 items. This Likert-type scale is responded as strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), and strongly agree (5). In the scale, there is no reverse coded item. The maximum score to be obtained from the scale is 80. The higher scores indicate that the participants have higher intercultural communicative awareness levels. The classification of the ICAWS for EFL learners are shown in Table 21.

Table 21

Classification of the Intercultural Communicative Awareness Scale for EFL learners

| Construct | Item No | Statement |
|---|---|---|
| **Basic Cultural Awareness (Factor 1)** | **1** | Different cultures have different understandings of cultural concepts. |
| | **2** | I believe people should have empathy toward other cultures |
| | **3** | I believe our behaviors, beliefs, and attitudes are influenced by our culture. |
| | **4** | I can identify and explain my culture. |
| | **5** | I have enough knowledge of my own culture. |
| | **6** | I know the similarities and differences between my culture and other cultures. |
| | **7** | I can easily interpret cultural elements during intercultural communication. |
| | **8** | I believe we should learn about other cultures. |
| | **9** | I believe people should be open to other cultures. |
| **Advanced Cultural Awareness (Factor 2)** | **10** | I am aware of the ways to interact with individuals from different cultures. |
| | **11** | I am aware of the ways to obtain information about different cultures. |
| | **12** | People should be aware of and respect differences. |
| | **13** | I am aware that stereotypes, prejudices, and preconceptions may have a negative effect on intercultural communication. |
| **Intercultural Awareness (Factor 3)** | **14** | People should develop an understanding of the cultural norms, facts, values, and lifestyles regarding other cultures. |
| | **15** | Developing intercultural awareness can reduce misunderstandings among people. |
| | **16** | Being aware of the cultural characteristics of other people can help us during intercultural communication |

### 3.4.3. Intercultural Sensitivity Scale

The third tool used in the scale is the Intercultural Sensitivity Scale (ISS) developed by Chen and Starosta (2000). The ISS is a likert-type scale which is responded as strongly agree (5), agree (4), uncertain (3), disagree (2), and strongly disagree (1). There are a total of 24 items in the scale. Items 2, 4, 7, 9, 12, 15, 18, 20, and 22 should be reverse-coded prior to summing the total. The scale aims to evaluate the intercultural sensitivity levels of the participants. The Cronbach alpha reliability coefficient of the scale was found to be .86 by the researchers. There are five factors in the scale. These are "*Interaction Engagement"* (Items 1, 11, 13, 21, 22, 23, and 24), "*Respect for Cultural Differences"* (Items 2, 7, 8, 16, 18, and 20), *"Interaction Confidence"* (Items 3, 4, 5, 6, 21 and 10), *"Interaction Enjoyment*

*items"* (Items 9, 12, and 15), and *"Interaction Attentiveness"* (Items 14, 17, and 19). The total score to be obtained from the scale is 120. The higher scores indicate that the students have a better intercultural sensitivity.

### 3.5. Procedure

Participants were informed about the purposes, significance, and methodology before conducting the study. Necessary information related to intercultural communication and its assessment was given through classroom sessions. The approval of the Çanakkale Onsekiz Mart University Ethical Review Board was obtained before the study. Participants were ensured that their privacy would be considered and the study would not bear any psychological, social or political risks. In addition, a consent form indicating that they voluntarily participated in the study was taken from the participants.

#### 3.5.1. Pre-test Administration

Before starting to the instruction process, we administered a background questionnaire interrogating information such as gender, age, Foreign Language Exam (FLE) scores, and intercultural communication status. Then, students were distributed ICAN, ICAW, and IS scales and completed in the classroom as the pretest application and they responded to 16-item ICANS, 16-item ICAWS, and 24-item ISS. Following that, students were randomly assigned as in-class discussion and online discussion groups.

#### 3.5.2. Instruction

The study lasted five weeks. Both groups took the same in-class instruction designed based on the Byram's ICC framework (1997), Wintergerst and McVeigh's book "*Tips for Teaching Culture: Practical Approaches to Intercultural Communication*" (2011), and Čaňková and Gill's book "*Intercultural Activities*" (2002). While learners in the in-class discussion group made discussions in the classroom, participants in the online discussion group discussed the issues online with participants from other countries such as Indonesia, Taiwan, Poland, and Brazil through the Zoom software.

**Week 1**

The purpose of the first week was to improve the knowledge related to the definition of culture and develop basic cultural awareness. The instruction was designed based on "*attitudes (savoir ^etre*)", which promotes being sincere, open, and unbiased towards other people. To be able to do that, theoretical information related to the definition of culture was presented with a PowerPoint presentation. Following that, the teacher wrote "*Culture is* _____." on the board. Students formed small groups to complete the sentence with more than one word by taking notes about their ideas. The groups, then, shared their ideas with the class, and the teacher wrote their answers on the board. As the second part of the activity, groups were asked to complete the same sentence with only one word this time. Each group gave one answer. The teacher wrote the answers on the board and asked students to examine the answers. The answers were discussed in terms of similarities and differences. Therefore the issue was discussed in detail. As the final step of the activity, the teacher wrote "*Culture is like a/an* _____." on the board. This time, students completed the sentences individually, wrote their ideas, and shared their answers with their peers. As the second part of the instruction, the teacher draw an iceberg to identify the hidden aspects of culture. Then, students were asked about their existing knowledge about icebergs. Following that, the teacher wrote "*Big C culture*" and "*Little c culture*" on the board and gave some examples. The teacher gave some theoretical information about Hall's Cultural Iceberg Model (1976) and explained what *Big C / Little c* is. The students were given time to think and give examples. The teacher wrote the answers on the board and discussed them with the class. Finally, the teacher asked "*Which aspects of a culture are easily visible to those from another culture?*", "*Which aspects seem hidden or more difficult to see?*", and "*Which aspects do you think would be the most challenging?*". After that, while the in-class discussion group made a discussion about festivals in Türkiye and around the world in the classroom, the online discussion group made the same discussion with the participants from other countries on Zoom under the supervision of the teacher. Online discussion sessions were organized by the teacher considering the suitability of the participants. For that reason, it was not possible to design a fully flexible blended learning approach.

**Week 2**

The objective of the second week was to increase the knowledge related to the culture and develop cultural awareness. The instruction was designed according to the *"knowledge (savoirs)"*, referring to being knowledgeable about the customs, practices, and habits of other social groups. Within this scope, the instruction started with the theoretical information regarding cultural knowledge, identity, gender roles, individualistic/collectivistic cultures, and low power distance/ high power distance between cultures. As the first activity of the instruction, the teacher handed out one slip of paper to each student. On the paper, information about different greeting types was written. Students read the paper and started acting. For instance, the student who picked greetings in Japan walked around the class and bowed to other people. Similarly, the student who picked greetings in Scandinavia walked around the class and nodded. Following the activity, students were asked about what they thought and how they felt. Oral reflections were taken from the students. As the second activity, the students were asked to imagine that they were foreigners in another country and to write a letter to themselves about their feelings, concerns, and challenges they would face. Students shared their letters with their peers and the teacher. As the final activity, the in-class discussion group made a discussion about the foods in Türkiye and worldwide in the classroom, whereas the students in the online discussion group made a discussion about foods online with intercultural participants on Zoom under the supervision of the teacher.

**Week 3**

The third week aimed to increase students' intecultural skills of interpreting and relating. The instruction was based on the "*skills of interpreting and relating (savoir comprendre)*", which suggests that individuals should have the required skills of interpreting an intercultural document or event and be able to explain and relate it to ones from their own cultures. The teacher gave theoretical information about the relationship between culture, language, and thought. In addition, they were given information about different speech communities, identifying differences between spoken and written language, and understanding language in context. Following that, the students were told that they would talk about their families. They were asked to share English words denoting family relationships. The teacher wrote answers on the board and drew a family tree on the board.

The students were asked to think about the differences between their native language and the English language. Therefore, students were aimed to understand the conceptual differences and similarities between languages. For instance, they noted that the word uncle denotes both mother's and father's brother in the English language, while there are two separate words in the Turkish language for the same concept. As the second activity, students read an essay about gender roles in the U.S. After reading, they were asked to make a comparison in terms of gender roles between Türkiye and the U.S. As the final activity, students in the in-class discussion group talked about famous quotes belonging to famous people in both Türkiye and worldwide in the classroom, while the students in the online discussion group talked about famous quotes with participants from different countries via Zoom software under the supervision of the teacher.

**Week 4**

The objective of the fourth week was to foster learners' abilities related to discovery and interaction. The activities and instruction was designed according to the "*skills of discovery and interaction (savoir apprendre/faire)",* described in Byram's ICC framework (1997). Byram describes this skill as the ability to acquire recent information about a culture and its practices and to be able to apply this information to the actual conversations. Within this scope, theoretical information related to the basics of nonverbal communication, similarities and differences between verbal and non verbal communication, the definition of physical time and space across cultures, and the concept of high context/low context communication were given through a PowerPoint presentation and by the teacher. Following that, the teacher prepared handouts which were related to cross-cultural problematic situations encountered during a visit to a foreign country. The students were informed that there was no right or wrong answers and they should make some suggestions to solve the problems. The teachers formed groups of 3-4 people. Each group took one incident. Students read the incident first and then discussed possible reasons and solutions for the conflict. After that, the incidents were discussed as a whole class and the teacher wrote important ideas on the board. As the second activity, the teacher wrote (1) hmmm (meaning: I didn't hear you), (2) hmmm (meaning: that's interesting), (3) umm-humm (meaning: yes or agreement), (4) umm-humm (meaning: no or disagreement), and (5) hmmm (meaning: pleasure or satisfaction). The teacher said each item emphasizing the intonation and explained their

meanings to the students. Next, the teacher asked students to give similar examples in their native language. As the final activity, the students in the in-class discussion group discussed gestures in the Turkish language and worldwide, whereas the students in the online discussion group discussed gestures with the participants from other countries on Zoom under the supervision of the teacher.

**Week 5**

The final week aimed to increase students' critical cultural and intercultural awareness levels. The instruction was based on Byram's *critical cultural awareness (savoir s'engager)"*, which refers to the ability to assess critically the cultural practices and viewpoints based on certain criteria. For that purpose, theoretical information about the concept of culture shock was given through a PowerPoint presentation by the teacher. The teacher defined culture shock and gave information about the stages of culture shock. In addition, the teacher explained the concept of stereotyping and gave some examples. As the first activity, the teacher discussed the basic concepts of cultural adjustment wiith the class and gave some examples. The teacher, then, drew a diagram which shows the stages of culture shock on the board. The students were told that everybody experiences culture shock to some extent but the duration and severity change from one individual to another. The students were asked to share whether they experienced a similar culture shock. The aim of this activity was to make students understand that experiencing a culture shock is usual. The second activity was about stereotyping. In this activity, the teacher formed group of 4 people. Then, the students were given pictures of various people and a set of job titles. They were asked to match the person with the correct job. The teacher, then, gave the correct answers and asked students whether they correctly guessed the person and the job. Most of the students had wrong answers because they matched the picture and the job based on stereotypical images. The class, then, discussed about stereotyping people and had a consensus that we should be free from prejudices and stereotypical images before communication. As the final activity, while the students in the in-class discussion group discussed various stereotypical images belonging to Turkish people and others, the students in the online discussion group made the same discussion online with participants from different countries on Zoom.

### 3.5.3. Post-test Administration

After the instruction process, students were told to share their ideas and feelings orally. Following that, ICAN, ICAW, and IS scales were administered again as the post-test application. The participants responded to 16-item ICANS, 16-item ICAWS, and 24-item ISS. After that, students wrote reflections about the class and activities. Finally, interviews were conducted with students on a voluntary basis.

## 3.6. Data Analysis

As we mentioned earlier, this study utilizes a quantitatively driven mixed methods design, the aim of which is to look for answers to the research questions in the quantitative paradigm and support the findings through qualitative data collection and analysis techniques. The quantitative data collection process consisted of two main periods; scale development procedure and carrying out the main study. The qualitative data, on the other hand, were collected through semi-structured interviews conducted with students who actively participated in activities and discussions. Statistical Package for Social Sciences (SPSS) was used with the aim of analyzing the quantitative data. In the scale development process, exploratory factor analyses were conducted with SPSS and confirmatory factor analyses were conducted with SPSS AMOS software. In the main study, non-parametric tests were preferred since the number of individuals is below 30 in the groups (Saka, 2005). For that reason, the Wilcoxon signed-rank test was used to investigate in-group differences while the Mann-Whitney U test for independent variables was used to examine inter-group differences on SPSS. Qualitative data were analyzed with the content analysis methods by using Maxqda Analytics Pro 2020 software.

# CHAPTER IV

# FINDINGS

## 4.1. Introduction

In this section, the findings obtained via the research instruments mentioned above are illustrated on the basis of the research questions. First, it starts with the blended intercultural instruction effect on intercultural communicative anxiety levels of pre-service EFL teachers. Second, it presents the results regarding the effect of the blended intercultural instruction on the intercultural communicative awareness levels of pre-service EFL teachers. Third, it indicates the findings regarding the effect of the blended intercultural instruction on the intercultural sensitivity levels of pre-service EFL teachers. Finally, the section finishes with the findings obtained from the analysis of the qualitative data through interviews, essays, and reflections.

## 4.2. Findings regarding the Research Question 1

*RQ1a: Does the blended intercultural instruction have an effect on EFL learners' intercultural anxiety levels?*

The Wilcoxon signed-rank tests were used to investigate the difference between the pre- and post- ICAN levels of EFL learners for each group. To do this, first the pre- and post-ICAN scores of the in-class discussion group were computed. When Table 22 is examined, concerning the items in *Intercultural Communicative Difficulty* construct, it is seen that there was a slight decrease between pre-test ($M$ = 26.54, $SD$ = 4.44) and post-test ($M$ = 26.10, $SD$ = 5.12), which is not statistically significant ($Z$ = -.629, $p$ > .05). Regarding the items under the *Intercultural Communicative Willingness* construct, it is found that there existed a slight decrease between pre-test ($M$ = 16.79, $SD$ = 2.59) and post-test ($M$ = 15.57, $SD$ = 3.75), which is not significant ($Z$ = -1.541, $p$ > .05). As for the items in the *Intercultural Communicative Uncertainty* construct, a slight decrease was observed between between pre-test ($M$ = 16.82, $SD$ = 2.72) and post-test ($M$ = 16.28, $SD$ = 3.02), which is not significant ($Z$ = -1.223, $p$ > .05). Finally, regarding the Intercultural Communicative Anxiety scale total

scores, it was found that there was a slight decrease between pre-test ($M$ = 60.14 $SD$ = 8.50) and post-test ($M$ = 57.96, $SD$ = 10.79), which is not statistically significant ($Z$ = -1.289, $p$ > .05). In conclusion, intercultural anxiety levels of the EFL learners in the in-class discussion group slightly decreased as a result of the intercultural instruction, however, this decrease was not statistically significant.

Table 22

Wilcoxon Signed Rank Test results of the in-class discussion group for ICANS

| Constructs | Items | Z | Sig | Negative Ranks | Positive Ranks | Ties | Total |
|---|---|---|---|---|---|---|---|
| **Intercultural Communicative Difficulty** | 8,9,10,11,12,13,16 | -.629 | .53 | 7[a] | 7[b] | 14[c] | 28 |
| **Intercultural Communicative Willingness** | 1,2,3,7,14 | -1.541 | .123 | 10[a] | 3[b] | 15[c] | 28 |
| **Intercultural Communicative Uncertainty** | 4,5,6,15 | -1.223 | .221 | 8[a] | 4[b] | 16[c] | 28 |
| **Intercultural Communicative Anxiety Total** | | -1.289 | .198 | 9[a] | 5[b] | 14[c] | 28 |

**Note:** [a]Post < Pre; [b]Post > Pre; [c]Post = Pre.

The pre- and post- ICAN scores of the online discussion group were analysed. When Table 22 is examined, concerning the items in *Intercultural Communicative Difficulty* construct, it is seen that there was a dramatic decrease between pre-test ($M$ = 28.29, $SD$ = 3.77) and post-test ($M$ = 20.46, $SD$ = 3.33), which is statistically significant ($Z$ = -.4.274, $p$ < .001). Regarding the items under the *Intercultural Communicative Willingness* construct, it is found that there existed a sharp decrease between pre-test ($M$ = 17.04, $SD$ = 2.59) and post-test ($M$ = 11.71, $SD$ = 3.27), which is statistically significant ($Z$ = -1.541, $p$ < .001). As for the items in the *Intercultural Communicative Uncertainty* construct, a strong decrease was found between between pre-test ($M$ = 17.04, $SD$ = 2.53) and post-test ($M$ = 13.29, $SD$ = 3.45), which is statistically significant ($Z$ = -1.223, $p$ > .05). Finally, regarding the Intercultural Communicative Anxiety scale total scores, it was found that there was a

decrease between pre-test (*M* = 60.14 *SD* = 8.50) and post-test (*M* = 57.96, *SD* = 10.79), which is statistically significant (*Z* = -3.613, *p* < .001). In conclusion, intercultural anxiety levels of the EFL learners in the online discussion group considerably decreased as a result of the intercultural instruction.

Table 23

Wilcoxon Signed Rank Test results of the online discussion group for ICANS

| Constructs | Items | Z | Sig | Negative Ranks | Positive Ranks | Ties | Total |
|---|---|---|---|---|---|---|---|
| **Intercultural Communicative Difficulty** | 8,9,10,11,12,13,16 | -4.274 | **.00** | 25[a] | 3[b] | 0[c] | 28 |
| **Intercultural Communicative Willingness** | 1,2,3,7,14 | -3.956 | **.00** | 23[a] | 3[b] | 2[c] | 28 |
| **Intercultural Communicative Uncertainty** | 4,5,6,15 | -3.613 | **.00** | 21[a] | 5[b] | 2[c] | 28 |
| **Intercultural Communicative Anxiety Total** | | -4.259 | **.00** | 25[a] | 3[b] | 0[c] | 28 |

**Note:** [a]Post < Pre; [b]Post > Pre; [c]Post = Pre.

*RQ1b: Is there any difference between traditional and blended environments in terms of intercultural anxiety levels of EFL learners?*

The data regarding the group differences in terms of pre- and post- intercultural anxiety levels of EFL learners were analysed using Mann-Whitney U test for independent variables. First, pre-test results regarding the group difference in terms of intercultural anxiety levels of EFL learners were analysed. As can be seen in Table 23, there was no statistically significance difference between in-class discussion group (*M* = 60.14, *SD*=8.51) and online discussion group (*M* = 62.36, *SD*=8.30) in terms of intercultural communicative anxiety pre-test total scores (*U*=331, p >.05). When the items were analyzed in detail, as for the items in the *Intercultural Communicative Difficulty* dimension, no statistically significance difference was found between in-class discussion group (*M* = 26.54, *SD*=4.44)

and online discussion group (*M* = 28.29, *SD*=3.79) in terms of intercultural communicative difficulty pre-test results (*U*=304, p >.05). Regarding the items in the *Intercultural Communicative Willingness* construct, no significant difference was observed between in-class discussion group (*M* = 16.79, *SD*=2.58) and online discussion group (*M* = 17.03, *SD*=2.59) in terms of intercultural communicative willingness pre-test results (*U*=696, p >.05). Finally, concerning the items in the *Intercultural Communicative Uncertainty* factor, there was no significant difference between in-class discussion group (*M* = 16.82, *SD*=2.72) and online discussion group (*M* = 17.04, *SD*=2.53) in terms of intercultural communicative willingness pre-test results (*U*=377, p >.05).

Table 24

Pre-test Mann-Whitney U results of ICANS

| **Constructs** | **Items** | ***U*** | **Sig** | **Mean Ranks (Online discussion Group)** | **Mean Ranks (In-class discussion Group)** | **Total** |
|---|---|---|---|---|---|---|
| **Intercultural Communicative Difficulty** | 8,9,10,11,12,13,16 | 303.50 | .144 | 31.66 | 25.34 | 56 |
| **Intercultural Communicative Willingness** | 1,2,3,7,14 | 368.50 | .696 | 29.34 | 27.66 | 56 |
| **Intercultural Communicative Uncertainty** | 4,5,6,15 | 376.50 | .797 | 29.05 | 27.95 | 56 |
| **Intercultural Communicative Anxiety Total** | | 331.00 | .316 | 30.68 | 26.32 | 56 |

Post-test results regarding the group difference in terms of intercultural anxiety levels of EFL learners were analysed with Mann-Whitney U test. As can be seen in Table 24, a statistically significance difference was found between in-class discussion group (*M* = 57.96, *SD* = 10.79) and online discussion group (*M* = 46.36, *SD* = 7.70) in terms of intercultural communicative anxiety post-test total scores (*U*=145, p <.001). When the items were analyzed in detail, as for the items in the *Intercultural Communicative Difficulty* dimension,

there existed a statistically significance difference between in-class discussion group (*M* = 26.11, *SD* = 5.12) and online discussion group (*M* = 20.46, *SD*=3.33) in terms of intercultural communicative difficulty post-test results (*U*=153, p <.001). Regarding the items in the *Intercultural Communicative Willingness* construct, there was a statistically significant difference between in-class discussion group (*M* = 15.57, *SD*=3.75) and online discussion group (*M* = 11.71, *SD* = 3.28) in terms of intercultural communicative willingness post-test results (*U*=177, p <.001). Finally, concerning the items in the *Intercultural Communicative Uncertainty*, a statistically significant difference was observed between in-class discussion group (*M* = 16.29, *SD* = 3.01) and online discussion group (*M* = 13.29, *SD* = 3.45) in terms of intercultural communicative willingness post-test results (*U*=203, p <.001).

Table 25

Post-test Mann-Whitney U results of ICANS

| **Constructs** | **Items** | ***U*** | **Sig** | **Mean Ranks (Online discussion Group)** | **Mean Ranks (In-class discussion Group)** | **Total** |
|---|---|---|---|---|---|---|
| **Intercultural Communicative Difficulty** | 8,9,10,11,12,13,16 | 152.50 | **.00** | 19.95 | 37.05 | 56 |
| **Intercultural Communicative Willingness** | 1,2,3,7,14 | 176.50 | **.00** | 20.80 | 36.20 | 56 |
| **Intercultural Communicative Uncertainty** | 4,5,6,15 | 202.50 | **.00** | 21.73 | 35.27 | 56 |
| **Intercultural Communicative Anxiety Total** | | 144.50 | **.00** | 19.66 | 37.34 | 56 |

*RQ1c: Is there a relationship between age, gender, and intercultural experience with intercultural anxiety levels of EFL learners?*

Since the data did not display a normal distribution, Spearman's rank correlation was used to investigate the relationship between age, gender, foreign language exam scores, and

intercultural experience with the total scores obtained from the ICAN scale. Accordingly, when the total post-test results of the ICAN scale for EFL learners was considered, there was an extremely weak positive correlation between age and ICAN post-test scores, *r* (54) = .002, p > 05. As for the relationship between the total post-test results of the ICAN and gender, a weak negative correlation was encountered between gender and ICAN post-test results, *r* (54) = -.220, p > 05. Concerning the relationship between foreign language exam scores and the total post-test results of the ICAN scale, there was a weak negative correlation between the two variables, *r* (54) = -.168, p > 05. Finally, regarding the relationship between the total post-test results of the ICAN and intercultural experience status, it was seen that there was an extremely weak negative correlation between the two variables, *r* (54) = -.021, p > 05. The results of the spearman's rank correlation test can be seen in Table 26.

Table 26

Relationship between age, gender, FLE, and intercultural experience with intercultural anxiety levels of EFL learners

| | | **Age** | **Gender** | **FLE scores** | **Intercultural Experience** |
|---|---|---|---|---|---|
| **ICANTotal (Post)** | **Correlation Coefficient** | .002 | -.220 | -.168 | -.021 |
| | **Sig.(2-tailed)** | .990 | .103 | .216 | .876 |
| | **Number** | 56 | 56 | 56 | 56 |

### 4.3. Findings regarding the Research Question 2

*RQ2a: Does the blended intercultural instruction have an effect on EFL learners' intercultural awareness levels?*

The Wilcoxon signed-rank tests were used to examine the difference between the pre- and post- intercultural communication levels of EFL learners for each group. To do this, first the pre- and post- ICAN scores of the in-class discussion group were investigated. When Table 27 is examined, concerning the items in the *Basic Cultural Awareness* construct, it is seen that there was a slight increase between pre-test (*M* = 26.25, *SD* = 4.04) and post-test (*M* = 28.46, *SD* = 6.78), which is not statistically significant (*Z* = -.666, *p* > .05). Regarding the items under the *Advanced Cultural Awareness* construct, it is found that there existed a

slight increase between pre-test (*M* = 11.75, *SD* = 2.10) and post-test (*M* = 12.50, *SD* = 2.87), which is not significant (*Z* = -1.529, *p* > .05). As for the items in the *Intercultural Awareness* construct, a moderate increase was observed between between pre-test (*M* = 9.54, *SD* = 1.62) and post-test (*M* = 12.50, *SD* = 2.87), which is significant (*Z* = -2.371, *p* < .05). Finally, regarding the Intercultural Communicative Awareness scale total scores, it was found that there was a slight increase between pre-test (*M* = 47.54 *SD* = 6.78) and post-test (*M* = 51.39, *SD* = 10.75), which is not statistically significant (*Z* = -1.918, *p* > .05). In conclusion, intercultural awareness levels of the EFL learners in the in-class discussion group slightly increased as a result of the intercultural instruction, however, this decrease was not statistically significant.

Table 27

Wilcoxon Signed Rank Test results of the in-class discussion group for ICAWS

| **Constructs** | **Items** | **Z** | **Sig** | **Negative Ranks** | **Positive Ranks** | **Ties** | **Total** |
|---|---|---|---|---|---|---|---|
| **Basic Cultural Awareness** | 1,2,,3,4,5,6,7,8,9, | -1.666 | 0.96 | 3[a] | 11[b] | 14[c] | 28 |
| **Advanced Cultural Awareness** | 10,11,12,13 | -1.529 | .123 | 4[a] | 10[b] | 14[c] | 28 |
| **Intercultural Awareness** | 14,15,16 | -2.371 | **.018** | 1[a] | 10[b] | 14[c] | 28 |
| **Intercultural Communicative Awareness Total** | | -1.918 | .055 | 3[a] | 11[b] | 14[c] | 28 |

**Note:** [a]Post < Pre; [b]Post > Pre; [c]Post = Pre.

The pre- and post- ICAW scores of the online discussion group were analysed. When Table 28 is examined, concerning the items in *Basic Cultural Awareness* construct, it is seen that there was an increase between pre-test (*M* = 25.46, *SD* = 3.21) and post-test (*M* = 35.36, *SD* = 5.42), which is statistically significant (*Z* = -.4.279, *p* < .001). Regarding the items under the *Advanced Cultural Awareness* construct, it is found that there existed a sharp increase between pre-test (*M* = 11.14, *SD* = 1.84) and post-test (*M* = 15.43, *SD* = 2.43), which is statistically significant (*Z* = -4.139, *p* < .001). As for the items in the *Intercultural Awareness* construct, a strong increase was found between between pre-test (*M* = 9.39, *SD*

= 1.31) and post-test (*M* = 12.29, *SD* = 2.16), which is statistically significant (*Z* = -3.958, *p* < .001). Finally, regarding the Intercultural Communicative Awareness scale total scores, it was found that there was a strong increase between pre-test (*M* = 46.00 *SD* = 5.65) and post-test (*M* = 63.07, *SD* = 9.06), which is statistically significant (*Z* = -4.283, *p* < .001). In conclusion, intercultural awareness levels of the EFL learners in the online discussion group considerably increased as a result of the blended intercultural instruction.

Table 28

Wilcoxon Signed Rank Test results of the online discussion group for ICAWS

| Constructs | Items | Z | Sig | Negative Ranks | Positive Ranks | Ties | Total |
|---|---|---|---|---|---|---|---|
| **Basic Cultural Awareness** | 1,2,,3,4,5,6,7,8,9, | -4.279 | **.00** | 3[a] | 24[b] | 1[c] | 28 |
| **Advanced Cultural Awareness** | 10,11,12,13 | -4.139 | **.00** | 2[a] | 25[b] | 1[c] | 28 |
| **Intercultural Awareness** | 14,15,16 | -3.958 | **.00** | 3[a] | 22[b] | 3[c] | 28 |
| **Intercultural Communicative Awareness Total** | | -4.283 | **.00** | 4[a] | 24[b] | | 28 |

**Note:** [a]Post < Pre; [b]Post > Pre; [c]Post = Pre.

*RQ2b: Is there any difference between traditional and blended environments in terms of intercultural awareness levels of EFL learners?*

The data regarding the group differences in terms of pre- and post- intercultural anxiety levels of EFL learners were analysed using Mann-Whitney U test for independent variables. First, pre-test results regarding the group difference in terms of intercultural awareness levels of EFL learners were computed. As can be seen in Table 29, there was no statistically significance difference between in-class discussion group (*M* = 47.54, *SD* = 6.78) and online discussion group (*M* = 46.00, *SD* = 5.66) in terms of intercultural communicative anxiety pre-test total scores (*U* = 342, p > .05). When the items were analyzed in detail, as for the items in the *Basic Cultural Awareness* dimension, no statistically significance difference was found between in-class discussion group (*M* = 26.25,

*SD*=4.04) and online discussion group (*M* = 25.46, *SD* = 3.21) in terms of basic cultural awareness pre-test results (*U* = 353, p > .05). Regarding the items in the *Advanced Cultural Awareness* construct, no significant difference was observed between in-class discussion group (*M* = 11.75, *SD* = 2.10) and online discussion group (*M* = 11.14, *SD* = 1.84) in terms of advanced cultural awareness pre-test results (*U* = 321, p >.05). Finally, concerning the items in the *Intercultural Awareness* factor, there was no significant difference between in-class discussion group (*M* = 9.54, *SD* = 1.62) and online discussion group (*M* = 9.39, *SD* = 1.31) in terms of intercultural awareness pre-test results (*U* = 387, p > .05).

Table 29

Pre-test Mann-Whitney U results of ICAWS

| **Constructs** | **Items** | ***U*** | **Sig** | **Mean Ranks (Online discussion Group)** | **Mean Ranks (In-class discussion Group)** | **Total** |
|---|---|---|---|---|---|---|
| **Basic Cultural Awareness** | 1,2,,3,4,5,6, 7,8,9, | 352.50 | .514 | 27.09 | 29.91 | 56 |
| **Advanced Cultural Awareness** | 10,11,12,13 | 321.00 | .238 | 25.96 | 31.04 | 56 |
| **Intercultural Awareness** | 14,15,16 | 386.50 | .926 | 28.30 | 28.70 | 56 |
| **Intercultural Communicative Awareness Total** | | 341.50 | .406 | 26.70 | 30.30 | 56 |

Post-test results regarding the group difference in terms of intercultural awareness levels of EFL learners were analysed with Mann-Whitney U test. As can be seen in Table 30, a statistically significance difference was found between in-class discussion group (*M* = 51.39, *SD* = 10.75) and online discussion group (*M* = 63.07, *SD* = 9.06) in terms of intercultural communicative awareness post-test total scores (*U*=155, p < .001). The items were analyzed in detail. As for the items in the *Basic Cultural Awareness* dimension, there existed a statistically significance difference between in-class discussion group (*M* = 28.46, *SD* = 6.78) and online discussion group (*M* = 35.36, *SD* = 5.42) in terms of basic intercultural awareness post-test results (*U* = 164, p < .001). Regarding the items in the *Advanced Cultural*

*Awareness* construct, there was a statistically significant difference between in-class discussion group (*M* = 12.50, *SD* = 2.87) and online discussion group (*M* = 15.43, *SD* = 2.43) in terms of advanced intercultural awareness post-test results (*U* = 173, p < .001). Finally, concerning the items in the *Intercultural Awareness* dimension, a statistically significant difference was observed between in-class discussion group (*M* = 10.43, *SD* = 1.75) and online discussion group (*M* = 12.29, *SD* = 2.16) in terms of intercultural awareness post-test results (*U*=207, p <.001).

Table 30

Post-test Mann-Whitney U results of ICAWS

| **Constructs** | **Items** | ***U*** | **Sig** | **Mean Ranks (Online discussion Group)** | **Mean Ranks (In-class discussion Group)** | **Total** |
|---|---|---|---|---|---|---|
| **Basic Cultural Awareness** | 1,2,,3,4,5,6, 7,8,9, | 163.50 | **.00** | 36.66 | 20.34 | 56 |
| **Advanced Cultural Awareness** | 10,11,12,13 | 173.00 | **.00** | 36.32 | 20.68 | 56 |
| **Intercultural Awareness** | 14,15,16 | 206.50 | **.00** | 35.13 | 21.88 | 56 |
| **Intercultural Communicative Awareness Total** | | 155.00 | **.00** | 36.96 | 20.04 | 56 |

*RQ2c: Is there a relationship between age, gender, and intercultural experience with intercultural awareness levels of EFL learners?*

Since the data did not display a normal distribution, Spearman's rank correlation was used to investigate the relationship between age, gender, foreign language exam scores, and intercultural experience with the total scores obtained from the ICAW scale. Accordingly, when the total post-test results of the ICAW scale for EFL learners was considered, there was an extremely weak positive correlation between age and ICAW post-test scores, *r* (54) = .053, p > 05. As for the relationship between the total post-test results of the ICAW and gender, a weak positive correlation was observed between gender and ICAW post-test

results, $r$ (54) = -.096, p > 05. Concerning the relationship between foreign language exam scores and the total post-test results of the ICAW scale, there was a weak positive correlation between the two variables, $r$ (54) = .193, p > 05. Finally, regarding the relationship between the total post-test results of the ICAW and intercultural experience status, it was seen that there was an extremely weak positive correlation between the two variables, $r$ (54) = .033, p > 05. The results of the spearman's rank correlation test can be seen in Table 31.

Table 31

Relationship between age, gender, FLE, and intercultural experience with intercultural awareness levels of EFL learners

| | | **Age** | **Gender** | **FLE scores** | **Intercultural Experience** |
|---|---|---|---|---|---|
| **ICAWTotal (Post)** | **Correlation Coefficient** | .053 | .096 | .193 | .033 |
| | **Sig.(2-tailed)** | .698 | .483 | .153 | .809 |
| | **Number** | 56 | 56 | 56 | 56 |

### 4.4. Findings regarding the Research Question 3

*RQ3a: Does the blended intercultural instruction have an effect on EFL learners' intercultural sensitivity levels?*

The Wilcoxon signed-rank tests were used to examine the difference between the pre- and post- intercultural sensitivity levels of EFL learners for each group. To do this, first the pre- and post- ICAN scores of the in-class discussion group were analysed. When Table 32 is examined, concerning the items in the *Interaction Engagement* construct, it is seen that there was a slight increase between pre-test ($M$ = 20.61, $SD$ = 2.33) and post-test ($M$ = 21.54, $SD$ = 3.16), which is statistically significant ($Z$ = -2.057, $p$ < .05). Regarding the items under the *Respect for Cultural Differences* construct, it is found that there existed a slight increase between pre-test ($M$ = 18.61, $SD$ = 3.33) and post-test ($M$ = 19.18, $SD$ = 4.00), which is not significant ($Z$ = -669, $p$ > .05). As for the items in the *Interaction Confidence* construct, a slight increase was observed between pre-test ($M$ = 12.07, $SD$ = 3.20) and post-test ($M$ = 12.89, $SD$ = 3.44), which is not significant ($Z$ = -1.297, $p$ < .05). Regarding the items under the Interaction Enjoyment factor, it was found that there was a slight increase between pre-

test (*M* = 8.36, *SD* = 1.73) and post-test (*M* = 8.96, *SD* = 2.35), which is not statistically significant (*Z* = -1.431, *p* > .05). Concerning the items in the *Interaction Attentiveness* construct, it is seen that there was a slight increase between pre-test (*M* = 8.36, *SD* = 1.57) and post-test (*M* = 9.11, *SD* = 1.77), which is not statistically significant (*Z* = -1.585, *p* < .05). Finally, when the intercultural sensitivity total scores are examined, it is seen that there was a slight increase between pre-test (*M* = 68.00, *SD* = 8.31) and post-test (*M* = 71.68, *SD* = 12.81), which is not statistically significant (*Z* = -1.664, *p* < .05. In conclusion, intercultural sensitivity levels of the EFL learners in the in-class discussion group slightly increased as a result of the intercultural instruction, however, this decrease was not statistically significant.

Table 32

Wilcoxon Signed Rank Test results of the in-class discussion group for ISS

| **Constructs** | **Items** | **Z** | **Sig** | **Negative Ranks** | **Positive Ranks** | **Ties** | **Total** |
|---|---|---|---|---|---|---|---|
| **Interaction Engagement** | 1,11,13,21,22,23 | -2.057 | **0.40** | 2[a] | 10[b] | 16[c] | 28 |
| **Respect for Cultural Differences** | 2,7,8,16,18,20 | -669 | .504 | 6[a] | 7[b] | 15[c] | 28 |
| **Interaction Confidence** | 3,4,5,6,10 | -1.297 | .195 | 5[a] | 8[b] | 15[c] | 28 |
| **Interaction Enjoyment** | 9,12 | -1.431 | .152 | 3[a] | 8[b] | 17[c] | 28 |
| **Interaction Attentiveness** | 14,17,19 | -1.585 | .113 | 4[a] | 9[b] | 15[c] | 28 |
| **Intercultural Sensitivity Total** | | -1.664 | .096 | 5[a] | 9[b] | 14[c] | 28 |

**Note:** [a]Post < Pre; [b]Post > Pre; [c]Post = Pre.

The pre- and post- ISS scores of the online discussion group were computed. When Table 33 is examined, concerning the items in the *Interaction Engagement* construct, it is seen that there was an increase between pre-test (*M* = 20.00, *SD* = 2.43) and post-test (*M* = 25.07, *SD* = 3.11), which is statistically significant (*Z* = -.4.123, *p* < .001). Regarding the items under the *Respect for Cultural Differences* construct, it is found that there existed a sharp increase between pre-test (*M* = 16.71, *SD* = 2.59) and post-test (*M* = 25.07, *SD* = 3.99), which is statistically significant (*Z* = -4.384, *p* < .001). As for the items in the *Interaction*

*Confidence* construct, a strong increase was found between between pre-test ($M$ = 12.04, $SD$ = 2.89) and post-test ($M$ = 15.68, $SD$ = 3.04), which is statistically significant ($Z$ = -3.549, $p$ < .001). As for the items in the *Interaction Enjoyment* construct, it is seen that there was an increase between pre-test ($M$ = 8.07, $SD$ = 1.65) and post-test ($M$ = 10.61, $SD$ = 2.48), which is statistically significant ($Z$ = -.3.336, $p$ < .001). Concerning the items in the *Interaction Attentiveness* construct, it is seen that there was an increase between pre-test ($M$ = 8.32, $SD$ = 1.44) and post-test ($M$ = 10.93, $SD$ = 1.94), which is statistically significant ($Z$ = -.3.621, $p$ < .001). Finally, regarding the Intercultural Sensitivity scale total scores, it was found that there was a strong increase between pre-test ($M$ = 65.14, $SD$ = 8.63) and post-test ($M$ = 87.36, $SD$ = 11.06), which is statistically significant ($Z$ = -4.278, $p$ < .001). In conclusion, intercultural sensitivity levels of the EFL learners in the online discussion group considerably increased as a result of the blended intercultural instruction.

Table 33

Wilcoxon Signed Rank Test results of the online discussion group for ISS

| **Constructs** | **Items** | **Z** | **Sig** | **Negative Ranks** | **Positive Ranks** | **Ties** | **Total** |
|---|---|---|---|---|---|---|---|
| **Interaction Engagement** | 1,11,13,21,22,23 | -4.123 | **.00** | 2[a] | 23[b] | 3[c] | 28 |
| **Respect for Cultural Differences** | 2,7,8,16,18,20 | -4.384 | **.00** | 2[a] | 24[b] | 2[c] | 28 |
| **Interaction Confidence** | 3,4,5,6,10 | -3.549 | **.00** | 5[a] | 22[b] | 1[c] | 28 |
| **Interaction Enjoyment** | 9,12 | -3.336 | **.00** | 5[a] | 21[b] | 2[c] | 28 |
| **Interaction Attentiveness** | 14,17,19 | -3.621 | **.00** | 3[a] | 22[b] | 3[c] | 28 |
| **Intercultural Sensitivity Total** | | -4.278 | **.00** | 3[a] | 24[b] | 1[c] | 28 |

**Note:** [a]Post < Pre; [b]Post > Pre; [c]Post = Pre.

*RQ3b: Is there any difference between traditional and blended environments in terms of intercultural sensitivity levels of EFL learners?*

The data regarding the group differences in terms of pre- and post- intercultural sensitivity levels of EFL learners were analysed using Mann-Whitney U test for independent variables. First, pre-test results regarding the group difference in terms of intercultural sensitivity levels of EFL learners were computed. As can be seen in Table 34, there was no statistically significance difference between in-class discussion group ($M$ = 68.00, $SD$ = 8.31) and online discussion group ($M$ = 65.14, $SD$ = 8.63) in terms of intercultural sensitivity pre-test total scores ($U$ = 316, p > .05). When the items were analyzed in detail, as for the items in the *Interaction Engagement* dimension, no statistically significance difference was found between in-class discussion group ($M$ = 20.61, $SD$=2.33) and online discussion group ($M$ = 20.00, $SD$ = 2.43) in terms of interaction engagement pre-test results ($U$ = 337, p > .05). Regarding the items in the *Respect for Cultural Differences* construct, a slight difference was observed between in-class discussion group ($M$ = 18.61, $SD$ = 3.33) and online discussion group ($M$ = 16.71, $SD$ = 2.59) in terms of the respect for cultural difference pre-test results ($U$ = 263, p <. 05). Considering the items in the *Interaction Confidence* dimension, no statistically significance difference was found between in-class discussion group ($M$ = 12.07, $SD$=3.20) and online discussion group ($M$ = 12.03, $SD$ = 2.89) in terms of interaction engagement pre-test results ($U$ = 387, p > .05). As for the items in the *Interaction Enjoyment* dimension, no statistically significance difference was found between in-class discussion group ($M$ = 8.36, $SD$ = 1.73) and online discussion group ($M$ = 8.07, $SD$ = 1.65) in terms of interaction enjoyment pre-test results ($U$ = 355, p > .05). Finally, concerning the items in the *Interaction Attentiveness* factor, there was no significant difference between in-class discussion group ($M$ = 8.36, $SD$ = 1.57) and online discussion group ($M$ = 8.32, $SD$ = 1.44) in terms of interaction attentiveness pre-test results ($U$ = 385, p > .05).

Table 34

Pre-test Mann-Whitney U results for ISS

| Constructs | Items | *U* | Sig | Mean Ranks (Online discussion Group) | Mean Ranks (In-class discussion Group) | Total |
|---|---|---|---|---|---|---|
| **Interaction Engagement** | 1,11,13,21, 22,23 | 337.00 | .362 | 26.54 | 30.46 | 56 |
| **Respect for Cultural Differences** | 2,7,8,16,18, 20 | 263.00 | **.33** | 23.89 | 33.11 | 56 |
| **Interaction Confidence** | 3,4,5,6,10 | 386.50 | .928 | 28.30 | 28.70 | 56 |
| **Interaction Enjoyment** | 9,12 | 354.50 | .528 | 27.16 | 29.84 | 56 |
| **Interaction Attentiveness** | 14,17,19 | 384.50 | .899 | 28.77 | 28.23 | 56 |
| **Intercultural Sensitivity Total** | | 315.50 | .208 | 25.77 | 31.23 | 56 |

Post-test results regarding the group difference in terms of intercultural sensitivity levels of EFL learners were analysed. As can be seen in Table 35, there was a statistically significance difference between in-class discussion group ($M$ = 71.68, $SD$ = 12.82) and online discussion group ($M$ = 87.36, $SD$ = 11.07) in terms of intercultural sensitivity post-test total scores ($U$ = 140, $p < .001$). When the items were analyzed in detail, as for the items in the *Interaction Engagement* dimension, a statistically significance difference was found between in-class discussion group ($M$ = 21.54, $SD$ = 3.16) and online discussion group ($M$ = 25.07, $SD$ = 3.12) in terms of interaction engagement post-test results ($U$ = 171, $p < .001$). Regarding the items in the *Respect for Cultural Differences* construct, a significant difference was observed between in-class discussion group ($M$ = 19.18, $SD$ = 4.00) and online discussion group ($M$ = 25.07, $SD$ = 4.00) in terms of the respect for cultural difference post-test results ($U$ = 121, $p < .001$). Considering the items in the *Interaction Confidence* dimension, a statistically significance difference was found between in-class discussion group ($M$ = 12.89, $SD$=3.45) and online discussion group ($M$ = 15.68, $SD$ = 3.04) in terms of interaction confidence post-test results ($U$ = 207, $p < .05$). As for the items in the

*Interaction Enjoyment* dimension, a statistically significance difference was found between in-class discussion group ($M$ = 8.96, $SD$ = 2.35) and online discussion group ($M$ = 10.61, $SD$ = 2.48) in terms of interaction enjoyment post-test results ($U$ = 247, $p < .05$). Finally, concerning the items in the *Interaction Attentiveness* factor, there was a significant difference between in-class discussion group ($M$ = 9.11, $SD$ = 1.77) and online discussion group ($M$ = 10.93, $SD$ = 1.94) in terms of interaction attentiveness post-test results ($U$ = 189, $p < .001$).

Table 35

Post-test Mann-Whitney U results for ISS

| **Constructs** | **Items** | ***U*** | **Sig** | **Mean Ranks (Online discussion Group)** | **Mean Ranks (In-class discussion Group)** | **Total** |
|---|---|---|---|---|---|---|
| **Interaction Engagement** | 1,11,13,21, 22,23 | 171.00 | **.00** | 36.39 | 20.61 | 56 |
| **Respect for Cultural Differences** | 2,7,8,16,18, 20 | 120.50 | **.00** | 38.20 | 18.80 | 56 |
| **Interaction Confidence** | 3,4,5,6,10 | 207.00 | **.002** | 35.11 | 21.89 | 56 |
| **Interaction Enjoyment** | 9,12 | 246.50 | **.016** | 33.70 | 23.30 | 56 |
| **Interaction Attentiveness** | 14,17,19 | 189.00 | **.001** | 35.75 | 21.25 | 56 |
| **Intercultural Sensitivity Total** | | 140.00 | **.00** | 37.50 | 19.50 | 56 |

*RQ3c: Is there a relationship between age, gender, and intercultural experience with intercultural sensitivity levels of EFL learners?*

The Spearman's rank correlation was used to investigate the relationship between age, gender, foreign language exam scores, and intercultural experience with the total scores obtained from the ISS. Accordingly, when the total post-test results of the ISS for EFL learners was considered, there was a weak negative correlation between age and ISS post-

test scores, *r* (54) = -.135, p > 05. As for the relationship between the total post-test results of the ISS and gender, a weak positive correlation was observed between gender and ISS post-test results, *r* (54) = .110, p > 05. Concerning the relationship between foreign language exam scores and the total post-test results of the ISS, there was a weak positive correlation between the two variables, *r* (54) = .170, p > 05. Finally, regarding the relationship between the total post-test results of the ISS and intercultural experience status, it was seen that there was a weak negative correlation between the two variables, *r* (54) = -.004, p > 05. The results of the spearman's rank correlation test can be seen in Table 36.

Table 36

Relationship between age, gender, FLE, and intercultural experience with intercultural sensitivity levels of EFL learners

| | | **Age** | **Gender** | **FLE scores** | **Intercultural Experience** |
|---|---|---|---|---|---|
| **ISSTotal (Post)** | **Correlation Coefficient** | .-135 | .110 | .170 | -.004 |
| | **Sig.(2-tailed)** | .320 | .419 | .209 | .977 |
| | **Number** | 56 | 56 | 56 | 56 |

### 4.5. Findings regarding the Research Question 4

*RQ4: What are the students' perceptions and opinions regarding the use of blended activities for intercultural communication?*

This section focuses on the qualitative findings obtained from the face-to-face interviews with the participants. Since this study has a quantitatively driven mixed methods design, it aimed to seek answers to the research questions in the quantitative paradigm and support the findings through qualitative data collection and analysis techniques. In this way, it aimed both to explore cause and effect relationships in a quantitative manner and to have a better understanding of the nature of the problem through qualitative techniques. A total of thirteen questions were asked to the participants in order to investigate students' perceptions and opinions regarding the use of blended activities for intercultural communication. The first two questions interrogated the use of social media and social media tools used. The third and fourth questions sought to find answers to the use of social media

for academic purposes. The fifth question focused on the frequency of using social media tools for academic purposes. The sixth question investigated the devices used to connect internet. The seventh question asked about the perceptions of communicating with individuals from other cultures through social media. The eighth question focused on the perceptions of culture teaching in classes. The ninth question investigated perceptions of intercultural communication teaching. The tenth question sought answers to the plans to integrate intercultural communicative competence into their lessons in the future. The eleventh question emphasized the perceptions regarding the use of blended activities for intercultural purposes. Finally, the twelfth question investigated the problems encountered during the activities conducted online. The answers given by the participants were transcribed and analyzed by using Maxqda Analytics Pro 2020 software. Content analysis method was used to analyze the data. The emerging themes and codes will be illustrated in the following section.

The participants were asked about whether they use social media or not. Acordingly all of the participants stated that they use social media. As seen in Table 37, the most frequently used applications were Instagram (N= 9, 19.15%) and WhatsApp (N=9, 19.15 %), which are followed by Twitter (N = 7, 14.89 %), YouTube (N = 7, 14.89 %), Facebook (N = 3, 6.38 %), Snapchat (N = 3, 6.38 %), Discord (N = 2, 4.26 %), Pinterest (N = 2, 4.26 %), Reddit (N = 2, 4.26 %), Twitch (N = 2, 4.26 %), and Slowly (N = 1, 2.13 %).

Table 37

Results regarding the theme social media tools used in general

| Theme | Tools | Frequency | Percentage | Participant |
|---|---|---|---|---|
| Social Media Tools | Instagram | 9 | 19.15 | P1, P2, P3, P5, P6, P7, P8, P9, P10 |
| | WhatsApp | 9 | 19.15 | P1, P2, P3, P4, P5, P7, P8, P9, P10 |
| | Twitter | 7 | 14.89 | P2, P3, P5, P6, P7, P9 |
| | YouTube | 7 | 14.89 | P3, P4, P5, P6, P7, P8, P10 |
| | Facebook | 3 | 6.38 | P1, P3, P4 |
| | Snapchat | 3 | 6.38 | P3, P6, P7 |
| | Discord | 2 | 4.26 | P5, P8 |
| | Pinterest | 2 | 4.26 | P4, P8 |
| | Reddit | 2 | 4.26 | P5, P8 |
| | Twitch | 2 | 4.26 | P3, P5 |
| | Slowly | 1 | 2.13 | P4 |

The participants were interviewed about if they use social media for academic purposes. The results indicated that all of the participants use social media for academic purposes. As seen in Table 38, the most frequently used applications for academic purposes were Microsoft Teams (N= 10, 28.57 %) and Zoom (N = 10, 28.57 %), which are followed by Instagram (N = 7, 20 %), YouTube (N = 5, 14.29 %), and Facebook (N = 3, 8.57 %),

Table 38

Results regarding the theme using social media for academic purposes

| Theme | Tools | Frequency | Percentage | Participant |
|---|---|---|---|---|
| Social Media Tools for Academic Purposes | Microsoft Teams | 10 | 28.57 | P1, P2, P3, P4, P5, P6, P7, P8, P9, P10 |
| | Zoom | 10 | 28.57 | P1, P2, P3, P4, P5, P6, P7, P8, P9, P10 |
| | Instagram | 7 | 20 | P1, P2, P3, P5, P6, P7, P9 |
| | YouTube | 5 | 14.29 | P3, P4, P5, P8, P10 |
| | Facebook | 3 | 8.57 | P1, P3, P4 |

The participants were interviewed about their social media usage habits for academic purposes. The results indicated that all of the participants use social media for academic purposes. As seen in Table 39, 40 % of the participants (N = 4) stated that they sometimes use social media, 30 % explained that they often use social media (N= 3), 20 % stated that they usually use social media, and 10 % said thay he / she uses it everyday.

Table 39

Results regarding the frequency of social media usage for academic purposes

| Theme | How often | Frequency | Percentage | Participant |
|---|---|---|---|---|
| The Frequency of Social Media Usage for Academic Purposes | Sometimes | 4 | 40 | P1, P2, P4, P7 |
| | Often | 3 | 30 | P5, P6, P9 |
| | Usually | 2 | 20 | P8, P10 |
| | Everyday | 1 | 10 | P3 |

To understand the issue better, some of the excerpts taken from the interviews will be presented below. For example,

> P2: *I sometimes use online tools for academic purposes especially when I have an assignment.*

> P4: *Sometimes. I use them for doing my homework and make a research*

> P5: *I often use online tools for academic purposes. I have online classes three times a week. I usually use google to translate something for my classes and make a research.*

> *P7- I am using it to follow an English learning page on Instagram. Sometimes I use them to read articles and sometimes I use them to complete my assignments.*

The sixth question investigated the devices that they use for connecting the internet. The results indicated that all of the participants use smartphones and computers. As seen in

Table 40, the most frequently used devices to connect internet were smartphones (N= 10, 45.45 %) and computers (N = 10, 45.45 %), which are followed by tablets (N = 2, 9.09 %).

Table 40

Results regarding the devices used to connect internet

| Theme | Device | Frequency | Percentage | Participant |
|---|---|---|---|---|
| Devices to connect | Smartphone | 10 | 45.45 | P1, P2, P3, P4, P5, P6, P7, P8, P9, P10 |
| | Computer | 10 | 45.45 | P1, P2, P3, P4, P5, P6, P7, P8, P9, P10 |
| | Tablet | 2 | 9.09 | P5, P9 |

The seventh question asked about the perceptions of communicating with individuals from other cultures through social media. Accordingly, all of the participants expressed positive perceptions of communicating with individuals from other cultures through social media. Figure 18 shows the word cloud regarding the perceptions of communicating with individuals from other cultures through social media.




Figure 18. The word cloud regarding the perceptions of communicating with individuals from other cultures through social media

To understand the issue better, some of the excerpts taken from the interviews are given below. For example,

P1: *Yes, it is effective because you can interact with people from different countries. Thus, you may develop your second language and knowledge about other cultures. If they are used properly, social media tools can be useful for students. You can also meet a lot of different people from all around the world without traveling. So it is a good way to use social media for interacting with other cultures.*

P2: *Yes, it is because if you are a shy person and can't communicate with people from other cultures, you can speak with them without seeing them and this makes life easier. So I can say that they are effective because they make it easier to communicate people who live in a different country.*

P4: *Social media is the most effective tool for communicating and interacting with other people. Because people don't have a chance to interact with other people. With social media, you can easily access any person whenever you want. These days, we cannot go to other countries but with social media, we can meet and talk to other people without going to foreign countries. This way, we can reach people and it makes learning a new language easier.*

P5: *Yes, social media is an effective tool for communicating and interacting with other cultures because we can communicate with other cultures at home thanks to social media. We don't have to go to another country to communicate with other people. We don't have the opportunity to go abroad, so we can find people from all over the world. I can say that using social media is our only hope to find new people to speak English. So I can say that it is super effective. I have an Instagram account and I post my art. People all around the world interact with me. I am talking with them so it is very effective.*

P10: *Yes, social media is effective in this manner. In this class we spoke with many people from other countries on social media. We talked about daily matters. I listened their stories. It was a very different experience. So social*

*media is an effective tool because it is free and easy to use. You can speak with other people wherever and whenever you want. We can improve our communication skills and the way we think and see the world.*

The eighth question focused on the perceptions of culture teaching in classes. Accordingly, all of the participants expressed positive opinions to the question of whether culture should be taught in language classes. Figure 19 demonstrates the word cloud regarding the perceptions of culture teaching in classes.

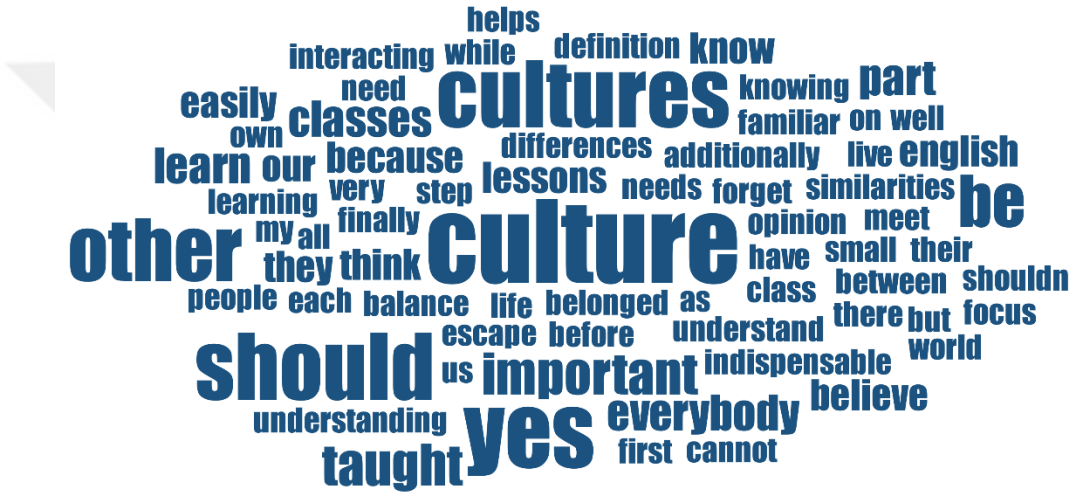



Figure 19. The word cloud regarding the perceptions of culture teaching

To understand the issue better, some of the excerpts taken from the interviews are presented below. For instance,

P2: *Yes. I believe culture should be taught in classes. But while learning other cultures, we shouldn't forget our own culture. So there should be a balance between our culture and other cultures. We should focus on differences and similarities.*

P4: *Yes, I think cultures should be taught in classes because we live in a small world and we cannot escape. Finally, we have to meet people from other cultures. Before interacting with other cultures, we should know about the definition of culture so we can learn about other cultures easily.*

P5: Y*es, I think culture is an indispensable part of our life. Knowing about culture helps us to understand other cultures easily.*

As for the ninth question that investigated perceptions of intercultural communication teaching, all of the students expressed that they have positive perceptions regarding the teaching of intercultural communication in language classes. Figure 20 indicates the word cloud regarding the perceptions of intercultural communication teaching.




Figure 20. The word cloud regarding the perceptions of intercultural communication teaching

To understand the issue better, some of the excerpts taken from the interviews are presented below. For instance,

P1: *I think Intercultural communication should be taught in classes. In this way, people can learn about other cultures and be more aware of the presence of others.*

P3: *I think it is very important. Intercultural communication should be taught in primary classes. Children should learn about respecting others when they are still young. You know there is a proverb in Turkish "ağaç yaş iken eğilir" which means you can educate someone easily when he is at a very young age.*

P5: *I think there should be separate classes to teach Intercultural communication because it is very important to know about other cultures. People should be open to other cultures and teaching Intercultural communication may help to communicate with other people easily.*

P7: *I think it is inevitable. Because, in Türkiye, nobody speaks English in the streets and we do not have the opportunity to speak English. By teaching Intercultural communication we can motivate students to speak with foreign people.*

P10: *I think it is very important in English classes because English is a world language and we need to communicate with other people using English. By teaching Intercultural communication, students learn to be open to other cultures and this makes language learning easier.*

The tenth question sought answers to the plans to integrate intercultural communicative competence into their lessons in the future. Accordingly, all of the participants stated that they have the intention of integrating intercultural communication into their classes in the future. Figure 21 presents the word cloud regarding the plans to integrate intercultural communicative competence into their lessons in the future.

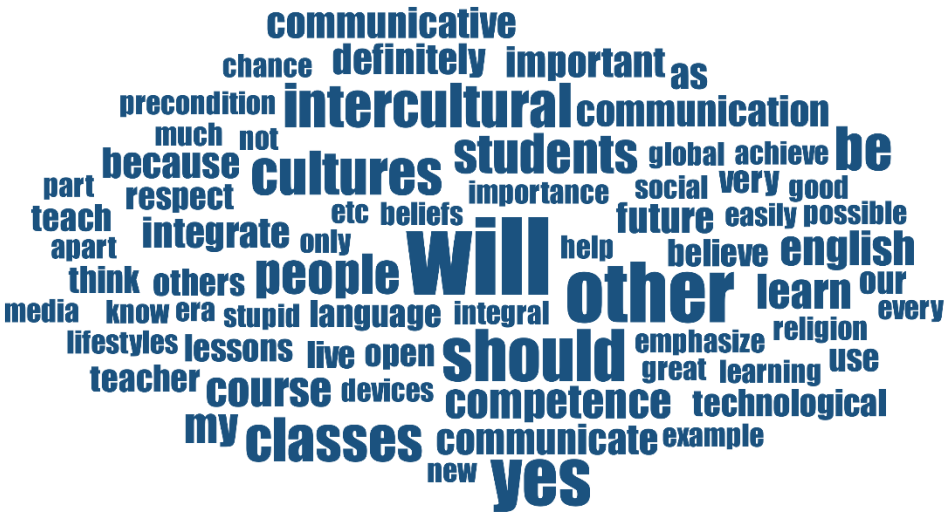



Figure 21. The word cloud regarding the plans to integrate intercultural communicative competence in the future

To understand the issue better, some of the excerpts taken from the interviews are presented below. For instance,

> P1: *Yes definitely I will. Students should respect others. This is only possible when you know about other cultures, so I will use Intercultural communicative competence in my classes and I will teach it to my students.*

> P4: *Of course, I will, as a future teacher, I should be a good example to other teachers and students. We live in a global world. We are learning English to communicate with other people and of course it is very important to integrate Intercultural communication competence into our classes.*

> P5: *Yes I will, apart from the English language, we should teach to respect other people's cultures, lifestyles, beliefs, religion, etc. In my future classes, I will emphasize the importance of Intercultural communication.*

> P9: *Of course, we live in a technological era. People can easily communicate with other people through technological devices. So students should be open to other cultures.*

As for the eleventh question which emphasized the perceptions regarding the use of blended activities for intercultural purposes, it is seen that all of the participants expressed positive opinions about the classes. Figure 22 presents the word cloud regarding the perceptions of the use of blended activities for intercultural purposes.




Figure 22. The word cloud regarding the perceptions regarding the use of blended activities for intercultural purposes.

To understand the issue better, some of the excerpts taken from the interviews are presented below. For instance,

> P1: *I think they were generally beneficial. Because, in my opinion, online tools are best way to communicate and learn about other cultures. As future teachers, it is important to have some knowledge about using them. I have a Zoom account and I am using it to communicate with other people from other countries. Thanks to that, I can speak with them and learn something new. So I can develop my speaking and writing skills as well as intercultural skills.*

> P2: *In my opinion, Blended activities were beneficial for me. Because everybod needs to be informed about other cultures and online tools enable opportunities to get contact with people from different cultures. In this way, I had a chance to communicate with someone from other cultures.*

> P3: *I believe they are very useful. In this class, I had an opportunity to communicate with other people from different countries and I became more tolerant and realized differences. I believe that those activities are necessary for all students to improve their communication skills. In this class, I met some people and I enjoyed it very much. I want to do this again in the future...*

P7: *I had a wonderful experience thanks to Emrah Teacher. We joined online classes on the Zoom application. There were some people from different cultures and nationalities. We learned about their cultures and they listened to us. I think it was fun and I felt that I have confidence in talking with people that I do not know well. It was very useful for me. Thanks, Emrah Teacher.*

P8: *Using Zoom was very useful for intercultural learning. At first, I was anxious. I believed that I wasn't able to speak well in front of the others. But, thanks to those activities, I had a chance to speak with other people. For example, I met a guy from Mexico we talked about our cultures. It was very fun. I am still meeting him. We became friends.*

The final question investigated the problems encountered during the activities conducted online. Three students (30%) stated that they encountered problems related to poor internet connection and two (20%) stated that they were anxious at the beginning. A sample excerpt taken from the interviews is presented below,

P4: *My dormitory has a poor internet connection. Sometimes I had problems because of the poor connection.*

P5: *At first, I was afraid of speaking. But then, I saw that the other people are just like me…*

To sum up, the chapter tried to shed light on the research questions within the scope of obtained findings through various quantitative and qualitative sources. With detailed analyses, tables, figures, and explanations, the issue was tried to be conceptualized and made more understandable for the readers.

# CHAPTER V

# DISCUSSIONS, CONCLUSIONS, AND IMPLICATIONS

## 5.1. Introduction

In this section, the findings regarding the research questions will be discussed in detail. To do this, first, the findings of research questions will be discussed and compared with the other studies in the literature, then the conclusions reached will be presented. Finally, the study will be completed with implications and suggestions for further research.

## 5.2. Discussions

This study mainly aimed to investigate the effectiveness of blended activities which are designed according to Byram's (1997) ICC Framework on EFL learners' intercultural competence levels. Another aim was to shed light on the perceptions of EFL learners regarding the use of web tools to promote intercultural communicative competence. To do this, data were collected from multiple sources including the Intercultural Communicative Awareness Scale for EFL learners, developed by the researcher within the scope of this study to investigate the intercultural awareness levels of EFL students subjected to research, the Intercultural Communicative Anxiety Scale for EFL learners, which was created by the researcher to shed light on the intercultural anxiety levels of EFL students subjected to research, the Intercultural Sensitivity Scale, developed by Chen and Starosta (2000), and face-to-face interviews with the participants to enlighten the perceptions of EFL learners regarding the use of Information and Communication Technologies (ICT) with the purposes of intercultural communication.

The first research question of the study included three sub-questions. The first sub-question was "Does the blended intercultural instruction have an effect on EFL learners' intercultural anxiety levels?". To do this, pre-test and post-test results of the groups were analyzed separately. When the results of the in-class discussion group are examined, it is observed that there was a slight decrease in the intercultural communicative anxiety levels of EFL students in the Intercultural Communicative Difficulty, Intercultural Communicative

Uncertainty constructs and Intercultural Communicative Anxiety scale total scores, and a slight increase in the Intercultural Communicative Willingness construct. Thus, it is possible to say that in-class intercultural activities slightly decreased the intercultural communicative anxiety levels of the students. On the other hand, considering the results of the online discussion group who took the same in-class instruction but made online discussions with the participants from other countries had significant gains in terms of intercultural anxiety levels. That is, as a result of the blended intercultural instruction, learners experienced less communicative difficulty, became more willing to communicate, had less intercultural uncertainty, and eventually, had less intercultural anxiety. The second sub-question was "Is there any difference between traditional and blended environments in terms of intercultural anxiety levels of EFL learners?". To answer this research question, the pre-test and post-test results of the online discussion and in-class discussion groups were compared. According to pre-test results, it is seen that there was no difference between groups in terms of Intercultural Communicative Difficulty, Intercultural Communicative Willingness, Intercultural Communicative Uncertainty, and intercultural communicative anxiety pre-test total scores. It can be understood from the results that the groups had similar anxiety levels before the instruction. On the other hand, as for the post test results, it is found that the group who made online discussions on Zoom outperformed the in-class discussion group in every construct. That is, the students in the online discussion group experienced less communicative difficulty, felt more enthusiasm, became more certain, and overall decreased their anxiety compared to in-class discussion group. As for the third-subquestion, "Is there a relationship between age, gender, and intercultural experience with intercultural anxiety levels of EFL learners?", it is seen that there was not a significant correlation between age, gender, and intercultural experience with intercultural anxiety levels. Accordingly, it can be said that no relationship exists between age, gender, and intercultural experience with intercultural anxiety levels, which might be related to the relatively low number of participants.

The results of this study are consistent with the study conducted by Coryell and Clark (2009) which found that participants of an online intercultural language course showed great enthusiasm to overcome anxiety caused by previous face-to-face and online experiences. In a wiki based study, Ku and Chen (2015) found that the students who took part in intercultural wiki based learning activities significantly lowered their social anxiety and foreign language anxiety levels. In their study carried out to investigate the difference between

telecollaboration and study abroad, Lee and Song (2019) found that telecollaboration group displayed a similar improvement to the study abroad group in terms of affective and behavioral factors related to intercultural communication competence. Finally, in another study, Khukhlaev and Bratkina (2021) discovered that uncertainty and anxiety were directly related to intercultural communication effectiveness.

The second research question of the study consisted of three sub-questions. The first sub-question was "Does the blended intercultural instruction have an effect on EFL learners' intercultural awareness levels?". To answer this question, pre-test and post-test results of the groups were analyzed separately. First, the results of the in-class discussion group were examined. Accordingly, it is seen that an increase was found between pre-test and post-test scores of the participants who took traditional in-class instruction in terms of Basic Cultural Awareness, Advanced Cultural Awareness, and Intercultural Awareness constructs as well as Intercultural Communicative Awareness scale total scores. To explain, as a result of the intercultural instruction carried out in the classroom, the in-class discussion group slightly increased their basic cultural knowledge, advanced cultural knowledge, and intercultural awareness levels and moderately increased their intercultural knowledge levels. On the other hand, when the results of the online discussion group who participated in online activities are examined, it is seen that the online discussion group significantly increased their intercultural communicative awareness levels. To explain, as a result of the intercultural instruction integrated with online activities, students became more knowledgeable about their own culture, gained more advanced cultural knowledge and intercultural knowledge, and became more interculturally aware. The second sub-question was "Is there any difference between traditional and blended environments in terms of intercultural awareness levels of EFL learners?". To answer this question, the pre-test and post-test results of the online discussion and in-class discussion groups were compared. According to pre-test results, it is seen that there was no difference between groups in terms of Basic Cultural Awareness, Advanced Cultural Awareness, and Intercultural Awareness as well as intercultural communicative awareness pre-test total scores. Accordingly, it is possible to say that the groups had similar awareness levels prior to the instruction. On the other hand, when the post-test results of both groups are examined, it is found that the online discussion group that discussed the topics online had higher intercultural awareness scores compared to the in-class discussion group. To explain, the students who took the in-class instruction

and made online discussions had more basic knowledge, demonstrated more advanced cultural knowledge, gained more intercultural knowledge, and increase their intercultural communicative awareness levels compared to the group who took the same in-class instruction and discussed the topics in the classroom. When the third-subquestion, "Is there a relationship between age, gender, and intercultural experience with intercultural awareness levels of EFL learners?" is examined, it is seen that there was not a significant correlation between age, gender, and intercultural experience with intercultural awareness levels. Therefore, it can be said that no relationship exists between age, gender, and intercultural experience with intercultural awareness levels. This result might be related to the relatively low number of participants. There is a need for larger scale research to investigate the issue further.

These results are consistent with the study of Abrams (2002) which found that Internet-oriented portfolios related to culture significantly changed students' views of other cultures and increased their intercultural awareness levels. In addition, Angelova and Zhao (2016), found that computer-mediated-communication (CMC) tools increased students' cross cultural awareness levels. In another study, Aristizábal and Welch (2017) investigated the potential of a Virtual Learning Community to exchange language and culture between American and Brazilian students. As a result of the analysis of data obtained from questionnaires, interviews, and written reports, it is observed that students increased their intercultural awareness levels, which is consistent with our results. Mitchell (2018) conducted a study to investigate the effectiveness of Pinterest to promote cross-cultural awareness. According to the results of the study which were obtained with qualitative data collection techniques, it is seen that the use of Pinterest developed intercultural awareness of the students. In addition, Kusumaningputri and Widodo (2018) found that digital photography oriented cross-cultural activities increased students' critical intercultural awareness levels. In another study, Üzüm et al. (2020) investigated the effect of a telecollaborative project on the intercultural communicative competence levels of pre-service teachers. Accordingly, they found that telecollaborative tasks increased teacher candidates' cultural and intercultural awareness levels as well as willingness to communicate with others. Finally, our results are consistent with the case study conducted by Chen and Yang (2016) which found that the research based telecollaborative project significantly increased students' critical intercultural awareness levels and motivation to communicate.

The third research question of the study included three sub-questions. The first sub-question was "Does the blended intercultural instruction have an effect on EFL learners' intercultural sensitivity levels?". To illuminate the issue, pre-test and post-test results of the groups were analyzed separately. First, the results of the in-class discussion group were investigated. Accordingly, it is seen that there was a slight increase between pre-test and post-test scores of the participants who made in-class discussions in terms of Interaction Engagement, Respect for Cultural Differences, Interaction Confidence, Interaction Enjoyment, Interaction Attentiveness, and intercultural sensitivity total scores. That is, as a result of the intercultural instruction combined with in-class intercultural discussions, the students slightly increased their engagement for intercultural interaction, respected other cultures, became confident, enjoyed intercultural interactions more, increased their attention, and increased their intercultural sensitivity levels slightly. On the other hand, when the results of the online discussion group who participated in online activities are examined, it is seen that the online-discussion group significantly increased their intercultural sensitivity levels. To clarify, as a result of the intercultural instruction combined with online discussions, students became more involved in intercultural interactions, showed more respect, felt more self-assurance, took more pleasure to take part in intercultural interactions, developed their concentration, and increased their intercultural sensitivity levels considerably. The second sub-question was "Is there any difference between traditional and blended environments in terms of intercultural sensitivity levels of EFL learners?". To have an answer to this question, the pre-test and post-test results of the online discussion and in-class discussion groups were examined. Pre-test results demonstrated that there was no difference between groups in terms of Interaction Engagement, Interaction Confidence, Interaction Enjoyment, Interaction Attentiveness, and intercultural sensitivity total scores, except for the Respect for Cultural Differences construct, which is not statistically significant. Therefore, it can be stated that the groups had similar sensitivity levels prior to the instruction. On the contrary, once the post-test results of both groups are investigated, it is observed that the online discussion group who discussed the topics online had higher intercultural sensitivity scores compared to the in-class discussion group. To illustrate, the participants who took the in-class instruction and made online discussions became more engaged in intercultural communicative events, showed more respect to others, became more confident, enjoyed the interactions more, increased their attentiveness, and increased their

intercultural sensitivity levels more than those of the in-class discussion group. When the third-subquestion, "Is there a relationship between age, gender, and intercultural experience with intercultural sensitivity levels of EFL learners?" is considered, it is found that there was not a significant correlation between age, gender, and intercultural experience with intercultural sensitivity levels. Accordingly, it might be possible to say that no relationship existed between age, gender, and intercultural experience with intercultural awareness levels. This result might be due to the relatively low number of the participants in this study.

Our results are consistent with the study of Shadiev et al. (2019) which found that technology assisted translation tools significantly facilitated students' intercultural sensitivity. In another study, Hur et al. (2020) investigated the effects of an online intercultural telecollaborative project to develop collaboration skills, self efficacy, and intercultural sensitivity of teacher candidates. A total of 115 teacher candidates from the USA and South Korea participated in the study. The results of the study that used a mixed methods design demonstrated that online collaboration increased teacher candidates' intercultural sensitivity levels. Wu et al. (2021) carried out a research to explore the influence of a technology assisted online writing instruction on writing skills and intercultural sensitivity levels of EFL learnes. Forty-eight participants from Taiwan were paired with American partners. According to the analysis of data collected with multiple quantitative and qualitative sources, the technology integrated online writing instruction was found to be effective in developing students' writing skills and intercultural sensitivity. Finally, Hagley (2020) examined the effects of a virtual exchange program on intercultural sensitivity levels of Japanese students. Accordingly, it was found that as a result of the international virtual exchange program utilizing the moodle platform, the students increased their intercultural sensitivity levels, appreciated other cultures, and gained more motivation and confidence to familiarize themselves with other cultures.

The fourth research question of the study "What are the students' perceptions and opinions regarding the use of blended activities for intercultural communication?" was asked to students to shed light on the attitudes and views of using online tools to promote intercultural communicative competence. First, the participants were asked whether they use social media or not. Accordingly, Instagram and WhatsApp were found to be the most frequently used social media tools the students use. This result is consistent with the

statistical data obtained from GlobalStats (2022). On the other hand, although Facebook has the highest number of users worldwide (GlobalStats, 2022), the use of Facebook was found to be low among our participants. This shows that Facebook is losing its popularity among university students. Second, the participants were interviewed about if they use social media for academic purposes. The findings showed that all of the participants used social media for academic purposes. This result is consistent with the data obtained from Statista (2022). The most frequently used applications for academic purposes were Microsoft Teams and Zoom. Due to the covid 19 pandemic affecting the world between 2019-2022, a number of classes have had to be conducted online. Since Balıkesir University has been using Microsoft Teams as an online education platform, all of the students stated that they use it for academic purposes. Additionally, within the scope of this class, all of the participants used Zoom for intercultural discussions. For this reason, they stated that they use Zoom for academic purposes. Third, the findings of the study indicated that most of students use social media frequently for academic purposes. This result is consistent with the study of Tartari (2015). The fourth finding regarding this research question was that all of the participants used smartphones and computers to connect internet. Only two students stated that they used their tablets as well as smartphones and computers to participate in online classes. This result is consistent with the data obtained from Statista (2022). The fifth finding of the study was that all of the participants expressed positive perceptions of communicating with individuals from other cultures through social media. This result is consistent with the study carried out Hsu and Beasley (2019) which found students had strong perceptions and gained positive attitudes as a result of a project using internet mediated communication tools. In addition, our finding is in line with the result of the study of Jung et al (2019) which found that learners had more positive perceptions as a result of the computer mediated intercultural instruction. The sixth finding related to the research question was that all of the participants expressed positive opinions to the question of whether culture should be taught in language classes. This result is consistent with the results of Castro et al. (2004), Atay et al. (2009), and Yesil and Demiröz (2017). As for the seventh finding, all of the students expressed that they have positive perceptions regarding the teaching of intercultural communication in language classes. This finding is in line with the findings of Al-Amir (2017) and Estaji and Rahimi (2018). On the other hand, Gu (2016) and Bouslama and Benaissi (2018) found that EFL teachers lack of a concise grasp of the intercultural communicative competence concept, which is contradictory to our findings. The eighth finding of the study is that all of the

participants expressed that they intend to integrate intercultural communication into their classes in the future. This result is in line with the studies of Lehmand (2017) and Lash et al. (2022). The ninth finding related to this research question was that all of the participants expressed positive opinions about the use of internet mediated tools for intercultural purposes, which is consistent with the results of Hsu and Beasley (2019) and Jung et al (2019). The final finding of this study related to the research question was that some students had issues with internet connections and some expressed concerns about using online tools for intercultural purposes. These findings are consistent with the results found by Ku and Chen (2015), Özdemir (2017), and Luo and Gui (2021).

### 5.3. Conclusions

By conducting this mixed-methods study, it was aimed to investigate the effects of intercultural instruction combined with online activities on the intercultural communicative competence levels of pre-service EFL teachers. In addition, the purpose of this study was to shed light on the perceptions of pre-service EFL teachers regarding the use of technological tools for intercultural purposes. In this section, the findings related to research questions will be summarized and implications for future research will be presented.

The main motive that directed us to carry out this research project was the lack of opportunity that the pre-service EFL teachers had in terms of communicating interculturally in the target language. Those teachers of future will teach students the importance of culture and its dimensions while teaching language. However, to be able to effectively do that, first, they need to familiarize themselves with the concept of culture and intercultural communication, which was neglected in the past (Atay, 2009). Additionally, in order to integrate technology into language classes effectively, factors associated with effective technology use were needed to be illuminated. Accordingly, blended instructional applications can successfully be integrated into the curriculum of Foreign Language Education (FLE) programs.

This study followed a mixed-methods design in order to collect and analyze data, and to make deductions by utilizing both qualitative and quantitative data collection and analysis methods (Tashakkori and Creswell, 2007). Within this scope, as a result of the exploratory

and confirmatory factor analyses, two scales, i.e. Intercultural Communicative Anxiety Scale for EFL learners (ICANS) and Intercultural Communicative Awareness Scale for EFL learners (ICAWS), were developed by the researcher to measure the intercultural anxiety and awareness levels of pre-service EFL teachers at the beginning and at the end of the blended intercultural instruction. Accordingly, it is possible to say that the study contributed to the related literature by designing new instruments to measure the intercultural awareness and anxiety levels of students in the Turkish EFL context. In addition, the Intercultural Sensitivity Scale (ISS) developed by Chen and Starosta (2000) was administered to the participants to have a judgement about the effectiveness of the blended intercultural instruction on intercultural competence. Finally, interviews were analyzed with the content analysis method (Creswell, 2012) to have a better understanding of the issue.

The first major finding of this study is that carefully planned in-class intercultural instruction has a positive effect in terms of decreasing the anxiety levels EFL learners. That is, both in-class discussion and online discussion groups favored intercultural instruction in terms of lowering their anxiety levels, experiencing less communicative difficulty, increasing communicative willingness, and decreasing their intercultural uncertainty. On the other hand, as for the comparison of the groups, it is seen that the online discussion group outperformed the in-class discussion group. At the end of the instruction, the group who took the instruction in the classroom and made the discussions online had a lower level of intercultural anxiety compared to in-class discussion group. According to the results, no significant relationship was found between age, gender, and intercultural experience with intercultural anxiety levels. This finding might be related to the relatively low number of participants or there might not be an existing relationship. This issue needs to be investigated in detail in further studies.

The second striking finding of the study is that intercultural instruction positively affects the intercultural awareness levels of EFL learners. To explain, not only the in-class discussion group but also the online discussion group exploited the intercultural instruction and increased their basic, advanced, and intercultural knowledge as well as intercultural awareness levels. As for the comparison between groups, it is observed that the online discussion group surpassed in-class discussion group in basic, advanced, and intercultural knowledge as well as intercultural awareness levels. At the end of the instruction, the

participants in the online discussion group became more aware of the presence of other cultures. On the other hand, there was no significant relationship between age, gender, and intercultural experience with intercultural anxiety levels, which needs to be explored.

The third prominent finding of the study is that intercultural instruction positively affects the intercultural sensitivity levels of EFL learners. As a result of the instruction, both groups experienced gains in terms of engagement in intercultural interactions, respecting other cultures, becoming confident, enjoying intercultural interaction, increasing their attention, and increasing their intercultural sensitivity levels. When the groups were compared, it is seen that online discussion group was more successful compared to in-class discussion group in terms of increasing their sensitivity levels. It is possible to say that by virtue of the intercultural instruction combined with online discussions, the participants in the online discussion group became more interculturally sensitive and competent. Similarly, no significant relationship was found between age, gender, and intercultural experience with intercultural sensitivity levels, which needs to be investigated in detail.

The final finding of this study is about the perceptions and opinions regarding the use of blended activities for intercultural purposes. Accordingly, it is clear that students mostly use Instagram and WhatsApp for communication, while they use Microsoft Teams and Zoom for academic purposes. It is also understood that participants frequently use online tools through smartphones and computers. In addition, pre-service teachers have positive attitudes and opinions about interacting with individuals from other cultures through social media, integrating culture into language classes, and utilizing intercultural communication in their future classes.

### 5.4. Implications

Within the scope of research findings, some implications can be made. First, language learners should be provided more opportunities to communicate with individuals from different cultures or countries. This may be facilitated by integrating online tools into language classes. To do this, policy makers, teachers, curriculum developers, and material developers should work in a harmony to create opportunities for fostering intercultural communicative competence of learners. Accordingly, policy makers, teachers and

curriculum and material developers should cooperatively design teaching materials that take intercultural communicative competence into consideration. In this way, it may be possible to create an intercultural learning and teaching environment which stimulates positive thinking and perceptions. Additionally, training and workshops led by native speakers of the target language should be organized to develop intercultural awareness. Second, learners should be encouraged to seek extracurricular ways to interact interculturally. By teaching the ways to find partners and make online discussions, the intercultural communicative competence of EFL learners may be developed, their intercultural awareness levels may increase, and their anxiety levels may decrease. Third, the sociological and psychological features of the learners should be explored in order to tailor the needs for effective intercultural communication. Fourth, some pre-service EFL teachers stated problems regarding the use of technology. Necessary effort should be spared to develop internet infrastructure and support should be provided.

Since this study utilized a mixed-methods design, there is a need for other studies using different research designs. So further research should focus on different designs that include different data collection and analysis techniques. In addition, this study used an instruction based on Byram's (1997) intercultural model. Other models of ICC should also be included in further studies. This study was also based on a blended approach that included using the Zoom application to support the in-class instruction. Further studies should investigate other web tools to promote intercultural instruction. Finally, the relationship between demographic variables such as age, gender, proficiency levels as well as intercultural experience should also be examined in detail with studies to be conducted with more participants.

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# APPENDICES

# APPENDIX 1

# INITIAL VERSION OF THE INTERCULTURAL COMMUNICATIVE ANXIETY SCALE

Dear participant,

This questionnaire below was developed to examine the anxiety levels during intercultural communication. Your answers will be kept confidential and used only for research purpose. Please circle the most appropriate choice (1-strongly disagree — 5-strongly agree). Thank you for your kind participation.

If you need further information, feel free to contact the researcher,

Emrah Özdemir

| **Part 1: Background Questionnaire** | | | |
|---|---|---|---|
| Age: | Grade: | Entrance English Exam Score: | Gender: Female (1) Male (2) |
| Have you ever communicated with someone from a different country? | | Yes (1) | No (1) |
| If your answer is "yes" how many times? | 1 ( ) | 2-4 ( ) | 5 or more ( ) |

| **EFL Learners' Intercultural Communication Anxiety** | | | | | |
|---|---|---|---|---|---|
| | Strongly Disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
| 1. I like talking with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 2. I can easily communicate with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 3. I avoid communicating with individuals from different cultures in the English language | (1) | (2) | (3) | (4) | (5) |
| 4. I am afraid of communicating with individuals from different cultures in the English language | (1) | (2) | (3) | (4) | (5) |
| 5. I am eager to participate in group discussions with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 6. I feel anxious when I am not certain about what is happening during intercultural communication in the English language. | (1) | (2) | (3) | (4) | (5) |
| 7. I am concerned about what other people think about me during intercultural communication in the English language. | (1) | (2) | (3) | (4) | (5) |
| 8. I feel anxious when I am not sure about what other people say during intercultural communication in the English language. | (1) | (2) | (3) | (4) | (5) |
| 9. I look for opportunities to communicate with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 10. I become confused while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 11. I feel nervous and anxious while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 12. I feel my heart beating faster while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 13. I sweat while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 14. I feel uncertain and unpleasant while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 15. I need to be sure about the content of speaking during intercultural communication | (1) | (2) | (3) | (4) | (5) |
| 16. Communicating with individuals from different cultures in the English language is difficult for me | (1) | (2) | (3) | (4) | (5) |
| 17. I have difficulty expressing my thoughts while communicating with individuals from different cultures in the English language | (1) | (2) | (3) | (4) | (5) |
| 18. I am keen on communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 19. I am worried about causing misunderstandings while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 20. I feel embarrassed while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 21. Having discussion with people from different cultures in the English language makes me nervous. | (1) | (2) | (3) | (4) | (5) |
| 22. I enjoy group discussions with others from different cultures in the English language | (1) | (2) | (3) | (4) | (5) |

# APPENDIX 2

# FINAL VERSION OF THE INTERCULTURAL COMMUNICATIVE ANXIETY SCALE

Dear participant,

This questionnaire below was developed to examine the anxiety levels during intercultural communication. Your answers will be kept confidential and used only for research purpose. Please circle the most appropriate choice (1-strongly disagree — 5-strongly agree). Thank you for your kind participation.

If you need further information, feel free to contact the researcher,

Emrah Özdemir

| **Part 1: Background Questionnaire** | | | |
|---|---|---|---|
| Age: | Grade: | Entrance English Exam Score: | Gender: Female (1) Male (2) |
| Have you ever communicated with someone from a different country? | | Yes (1) | No (1) |
| If your answer is "yes" how many times? | 1 ( ) | 2-4 ( ) | 5 or more ( ) |

| **EFL Learners' Intercultural Communication Anxiety** | **Strongly Disagree** | **Disagree** | **Neither agree nor disagree** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| 1. I become confused while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 2. I feel nervous and anxious while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 3. I feel my heart beating faster while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 4. I sweat while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 5. I feel uncertain and unpleasant while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 6. I have difficulty expressing my thoughts while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 7. I feel embarrassed while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 8. I like talking with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 9. I can easily communicate with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 10. I am eager to participate in group discussions with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 11. I look for opportunities to communicate with people from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 12. I am keen on communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |
| 13. I feel anxious when I am not certain about what is happening during intercultural communication in the English language. | (1) | (2) | (3) | (4) | (5) |
| 14. I am concerned about what other people think about me during intercultural communication in the English language. | (1) | (2) | (3) | (4) | (5) |
| 15. I feel anxious when I am not sure about what other people say during intercultural communication in the English language. | (1) | (2) | (3) | (4) | (5) |
| 16. I am worried about causing misunderstandings while communicating with individuals from different cultures in the English language. | (1) | (2) | (3) | (4) | (5) |

## APPENDIX 3

## INITIAL VERSION OF THE INTERCULTURAL COMMUNICATIVE AWARENESS SCALE

| EFL Learners' Intercultural Communication Awareness | | | | | |
|---|---|---|---|---|---|
| | Strongly Disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
| 1. I am aware of the concept of culture and its constituents. | (1) | (2) | (3) | (4) | (5) |
| 2. I think my culture is different from other cultures. | (1) | (2) | (3) | (4) | (5) |
| 3. Different cultures have a different understandings of cultural concepts | (1) | (2) | (3) | (4) | (5) |
| 4. I believe people should have empathy toward other cultures | (1) | (2) | (3) | (4) | (5) |
| 5. I believe our behaviors, beliefs and attitudes are influenced by our native culture. | (1) | (2) | (3) | (4) | (5) |
| 6. I can identify and explain my culture | (1) | (2) | (3) | (4) | (5) |
| 7. I have enough knowledge of my own culture. | (1) | (2) | (3) | (4) | (5) |
| 8. Culture has an important role in the interpretation. | (1) | (2) | (3) | (4) | (5) |
| 9. I know the similarities and differences between my culture and other cultures. | (1) | (2) | (3) | (4) | (5) |
| 10. I can easily interpret cultural elements during intercultural communication. | (1) | (2) | (3) | (4) | (5) |
| 11. I believe we should learn about other cultures. | (1) | (2) | (3) | (4) | (5) |
| 12. Some cultural issues can cause misunderstandings during intercultural communication. | (1) | (2) | (3) | (4) | (5) |
| 13. I believe people should be open to other cultures. | (1) | (2) | (3) | (4) | (5) |
| 14. I am aware of the ways to interact with individuals from different cultures. | (1) | (2) | (3) | (4) | (5) |
| 15. I am aware of the ways to obtain information about different cultures. | (1) | (2) | (3) | (4) | (5) |
| 16. People should be aware of and respect differences. | (1) | (2) | (3) | (4) | (5) |
| 17. I am aware that stereotypes, prejudices, and preconceptions may have a negative effect on intercultural communication. | (1) | (2) | (3) | (4) | (5) |
| 18. People should develop an understanding of the cultural norms, facts, values, and lifestyles regarding other cultures. | (1) | (2) | (3) | (4) | (5) |
| 19. Developing intercultural awareness can reduce misunderstandings among people. | (1) | (2) | (3) | (4) | (5) |
| 20. Being aware of the cultural characteristics of other people can help us during intercultural communication | (1) | (2) | (3) | (4) | (5) |
| 21. It's necessary to learn about how people from different countries behave in various circumstances to have better communication with them. | (1) | (2) | (3) | (4) | (5) |
| 22. The context in which the conversation occurs plays an important role in the interpretation during intercultural communication. | (1) | (2) | (3) | (4) | (5) |
| 23. I believe individuals' cultural beliefs affect their communication | (1) | (2) | (3) | (4) | (5) |
| 24. If I need more information about the person I communicate interculturally, I do not hesitate to search for it. | (1) | (2) | (3) | (4) | (5) |

## APPENDIX 4

## FINAL VERSION OF THE INTERCULTURAL COMMUNICATIVE AWARENESS SCALE

| EFL Learners' Intercultural Communication Awareness | | | | | |
|---|---|---|---|---|---|
| | Strongly Disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
| 1. Different cultures have different understandings of cultural concepts. | (1) | (2) | (3) | (4) | (5) |
| 2. I believe people should have empathy toward other cultures | (1) | (2) | (3) | (4) | (5) |
| 3. I believe our behaviors, beliefs, and attitudes are influenced by our culture. | (1) | (2) | (3) | (4) | (5) |
| 4. I can identify and explain my culture. | (1) | (2) | (3) | (4) | (5) |
| 5. I have enough knowledge of my own culture. | (1) | (2) | (3) | (4) | (5) |
| 6. I know the similarities and differences between my culture and other cultures. | (1) | (2) | (3) | (4) | (5) |
| 7. I can easily interpret cultural elements during intercultural communication. | (1) | (2) | (3) | (4) | (5) |
| 8. I believe we should learn about other cultures. | (1) | (2) | (3) | (4) | (5) |
| 9. I believe people should be open to other cultures. | (1) | (2) | (3) | (4) | (5) |
| 10. I am aware of the ways to interact with individuals from different cultures. | (1) | (2) | (3) | (4) | (5) |
| 11. I am aware of the ways to obtain information about different cultures. | (1) | (2) | (3) | (4) | (5) |
| 12. People should be aware of and respect differences. | (1) | (2) | (3) | (4) | (5) |
| 13. I am aware that stereotypes, prejudices, and preconceptions may have a negative effect on intercultural communication. | (1) | (2) | (3) | (4) | (5) |
| 14. People should develop an understanding of the cultural norms, facts, values, and lifestyles regarding other cultures. | (1) | (2) | (3) | (4) | (5) |
| 15. Developing intercultural awareness can reduce misunderstandings among people. | (1) | (2) | (3) | (4) | (5) |
| 16. Being aware of the cultural characteristics of other people can help us during intercultural communication | (1) | (2) | (3) | (4) | (5) |

# APPENDIX 5

**Intercultural Sensitivity Scale**

Below is a series of statements concerning intercultural communication. There are no right or wrong answers. Please work quickly and record your first impression by indicating the degree to which you agree or disagree with the statement. Thank you for your cooperation.

5 = strongly agree 4 = agree 3 = uncertain 2 = disagree 1 = strongly disagree

_____ 1. I enjoy interacting with people from different cultures.

_____ 2. I think people from other cultures are narrow-minded.

_____ 3. I am pretty sure of myself in interacting with people from different cultures.

_____ 4. I find it very hard to talk in front of people from different cultures.

_____ 5. I always know what to say when interacting with people from different cultures.

_____ 6. I can be as sociable as I want to be when interacting with people from different cultures.

_____ 7. I don't like to be with people from different cultures.

_____ 8. I respect the values of people from different cultures.

_____ 9. I get upset easily when interacting with people from different cultures.

_____10. I feel confident when interacting with people from different cultures.

_____11. I tend to wait before forming an impression of culturally-distinct counterparts.

_____12. I often get discouraged when I am with people from different cultures.

_____13. I am open-minded to people from different cultures.

_____14. I am very observant when interacting with people from different cultures.

_____15. I often feel useless when interacting with people from different cultures.

_____16. I respect the ways people from different cultures behave.

_____17. I try to obtain as much information as I can when interacting with people from different cultures.

_____18. I would not accept the opinions of people from different cultures.

_____19. I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.

_____20. I think my culture is better than other cultures.

_____21. I often give positive responses to my culturally different counterpart during our interaction.

_____22. I avoid those situations where I will have to deal with culturally-distinct persons.

_____23. I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.

_____24. I have a feeling of enjoyment towards differences between my culturallydistinct counterpart and me.

Note. Items 2, 4, 7, 9, 12, 15, 18, 20, and 22 are reverse-coded before summing the 24 items. Interaction Engagement items are 1, 11, 13, 21, 22, 23, and 24, Respect for Cultural Differences items are 2, 7, 8, 16, 18, and 20, Interaction Confidence items are 3, 4, 5, 6, and 10, Interaction Enjoyment items are 9, 12, and 15, and Interaction Attentiveness items are 14, 17, and 19.

# APPENDIX 6

## ARAŞTIRMA KATILIM FORMU (CONSENT FORM)

Bu çalışma Çanakkale Onsekiz Mart Üniversitesi Eğitim Bilimleri Enstitüsü doktora programı öğrencisi Emrah ÖZDEMİR tarafından Prof. Dr. Dinçay KÖKSAL danışmanlığında yürütülmektedir. Doktora tezi kapsamında uygulanmakta olan bu çalışma, harmanlanmış bir kültürlerarası eğitim programının İngilizceyi yabancı dil olarak öğrenen öğrencilerin kültürlerarası iletişim becerilerine etkisini ölçmeyi amaçlamaktadır.

Bu çalışma için gerekli izinler alınmıştır. Çalışmaya katılım gönüllülük esasına dayanmaktadır. Bu çalışma sırasında tarafınızı kişisel olarak olumsuz etkileyecek veya zorunlu olacağınız hiçbir yükümlülük bulunmamaktadır. Araştırmadan elde edilen bilgiler ve veriler sadece bilimsel amaçla ve kimliğiniz saklı tutularak kullanılacaktır. Çalışmayla ilgili daha fazla bilgi edinmek isterseniz araştırmacıyla iletişime geçebilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve elde edilen bilgi ve verilerin kimliğimin saklı tutularak bilimsel amaçlı çalışmalarda kullanılmasına izin veriyorum.

Adı Soyadı:

İmza:

Tarih:

# APPENDIX 7

## Results regarding the Piloting of the Main Study

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Age | 10 | 19,00 | 21,00 | 19,8000 | ,63246 |
| Grade | 10 | 2,00 | 2,00 | 2,0000 | ,00000 |
| FLE | 10 | 61,00 | 74,00 | 67,8000 | 4,13118 |
| Gender | 10 | 1,00 | 2,00 | 1,1000 | ,31623 |
| Valid N (listwise) | 10 | | | | |

**Test Statistics[a]**

| | PostICANCD - PreICANCD | PostICANCW - PreICANCW | PostICANCU - PreICANCU | PostICANTotal - PreICANTotal |
|---|---|---|---|---|
| Z | -2,803[b] | -2,812[b] | -2,194[b] | -2,805[b] |
| Asymp. Sig. (2-tailed) | ,005 | ,005 | ,028 | ,005 |

**Test Statistics[a]**

| | PostICAWBCA - PreICAWBCA | PostICAWACA - PreICAWACA | PostICAWICA - PreICAWICA | PostICAWTotal - PreICAWTotal |
|---|---|---|---|---|
| Z | -2,812[b] | -2,814[b] | -2,814[b] | -2,807[b] |
| Asymp. Sig. (2-tailed) | ,005 | ,005 | ,005 | ,005 |

**Test Statistics[a]**

| | PostISSInEng - PreISSInEng | PostISSRfCD - PreISSRfCD | PostISSInCon - PreISSInCon | PostISSInEnj - PreISSInEnjoy | PostISSInAt - PreISSInAt | PostISSTotal - PreISSTotal |
|---|---|---|---|---|---|---|
| Z | -2,829[b] | -2,809[b] | -2,604[b] | -2,095[b] | -2,818[b] | -2,805[b] |
| Asymp. Sig. (2-tailed) | ,005 | ,005 | ,009 | ,036 | ,005 | ,005 |

## APPENDIX 8

### Reliability Results of the Main Study

**Pre-test for the in-class discussion group**

| Scale | Cronbach's Alfa Coefficient |
|---|---|
| **ICANS** | .89 |
| **ICAWS** | .87 |
| **ISS** | .84 |

**Post-test for the in-class discussion group**

| Scale | Cronbach's Alfa Coefficient |
|---|---|
| **ICANS** | .94 |
| **ICAWS** | .96 |
| **ISS** | .94 |

**Post-test for the online discussion group**

| Scale | Cronbach's Alfa Coefficient |
|---|---|
| **ICANS** | .92 |
| **ICAWS** | .84 |
| **ISS** | .87 |

**Post-test for the online discussion group**

| Scale | Cronbach's Alfa Coefficient |
|---|---|
| **ICANS** | .83 |
| **ICAWS** | .92 |
| **ISS** | .90 |

## APPENDIX 9

## Lesson Plans

## LESSON PLAN (WEEK 1)

| **Topic:** "Attitudes (savoir ^etre)" |
|---|

**LESSON OBJECTIVE:**

| To improve the knowledge related to the definition of culture and develop basic cultural awareness |
|---|

**PROCEDURE:**

| **Time** | **Introduction:** | **Tools** |
|---|---|---|
| **20 Min.** | Theoretical information related to the definition of culture | **PowerPoint** |

| **Time** | **Main Content:** | **Tools** |
|---|---|---|
| **Task 1 (20 Min.)** | The teacher writes "*Culture is* _____." on the board. Students form small groups to complete the sentence with more than one word by taking notes about their ideas. The groups, then, share their ideas with the class, and the teacher writes their answers on the board.<br><br>Groups are asked to complete the same sentence with only one word this time. Each group gives one answer. The teacher writes the answers on the board and asked students to examine the answers. The answers are discussed in terms of similarities and differences.<br><br>The teacher writes "Culture is like a/an _____." on the board. This time, students complete the sentences individually, write their ideas, and share their answers with their peers. | **Board** |
| **Task 2 (20 Min.)** | The teacher draws an iceberg to identify the hidden aspects of culture. Then, students are asked about their existing knowledge about icebergs.<br><br>The teacher writes "Big C culture" and "Little c culture" on the board and gives some examples. The teacher gives theoretical information about Hall's Cultural Iceberg Model (1976) and explains what Big C / Little c is. Students are given time to think and give examples. The teacher writes the answers on the board and discusses them with the class.<br><br>The teacher asks "*Which aspects of a culture are easily visible to those from another culture?*", "*Which aspects seem hidden or more difficult to see?*", and "*Which aspects do you think would be the most challenging?*". | **Board** |
| **Task 3 (30 Min.)** | In-class discussion group makes a discussion about festivals in Türkiye and around the world in the classroom,<br><br>Online discussion group makes the same discussion with the participants from other countries on Zoom under the supervision of the teacher. | **Board / Zoom** |

## LESSON PLAN (WEEK 2)

**Topic:** "Knowledge (savoirs)"

### LESSON OBJECTIVE:

To increase the knowledge related to the culture and develop cultural awareness.

### PROCEDURE:

| Time | Introduction: | Tools |
|---|---|---|
| **20 Min.** | Theoretical information regarding cultural knowledge, identity, gender roles, individualistic/collectivistic cultures, and low power distance/ high power distance between cultures. | **PowerPoint** |

| Time | Main Content: | Tools |
|---|---|---|
| **Task 1 (20 Min.)** | The teacher hands out one slip of paper to each student. On the paper, information about different greeting types is written. Students read the paper and start acting.<br><br>Following the activity, students are asked about what they think and how they feel. Oral reflections are taken from the students. | **Handouts** |
| **Task 2 (20 Min.)** | Students are asked to imagine that they are foreigners in another country and to write a letter to themselves about their feelings, concerns, and challenges they will face.<br><br>Students share their letters with their peers and the teacher. | **A4 Paper** |
| **Task 3 (30 Min.)** | In-class discussion group makes a discussion about the foods in Türkiye and worldwide in the classroom,<br><br>Online discussion group makes a discussion about foods online with intercultural participants on Zoom under the supervision of the teacher | **Board / Zoom** |

## LESSON PLAN (WEEK 3)

| |
|---|
| **Topic:** "Skills of interpreting and relating (savoir comprendre)", |

### LESSON OBJECTIVE:

| |
|---|
| To increase students' intercultural skills of interpreting and relating |

### PROCEDURE:

| Time | Introduction: | Tools |
|---|---|---|
| **20 Min.** | Theoretical information about the relationship between culture, language, and thought. In addition, they were given<br><br>Theoretical information about different speech communities, identifying differences between spoken and written language, and understanding language in context. | **PowerPoint** |

| Time | Main Content: | Tools |
|---|---|---|
| **Task 1 (20 Min.)** | Students are told that they will talk about their families. They are asked to share English words denoting family relationships. The teacher writes answers on the board and draws a family tree on the board. The students are asked to think about the differences between their native language and the English language. | **Board** |
| **Task 2 (20 Min.)** | Students read an essay about gender roles in the U.S. After reading, they are asked to make a comparison in terms of gender roles between Türkiye and the U.S. | **Board** |
| **Task 3 (30 Min.)** | In-class discussion group talks about famous quotes belonging to famous people in both Türkiye and worldwide in the classroom,<br><br>Online discussion group talks about famous quotes with participants from different countries via Zoom software under the supervision of the teacher. | **Board / Zoom** |

## LESSON PLAN (WEEK 4)

| |
|---|
| **Topic:** "Skills of discovery and interaction (savoir apprendre/faire)" |

### LESSON OBJECTIVE:

| |
|---|
| To develop learners' abilities related to discovery and interaction. |

### PROCEDURE:

| Time | Introduction: | Tools |
|---|---|---|
| **20 Min.** | Theoretical information related to the basics of nonverbal communication, similarities and differences between verbal and non-verbal communication, the definition of physical time and space across cultures, and the concept of high context/low context communication | **PowerPoint** |

| Time | Main Content: | Tools |
|---|---|---|
| **Task 1 (20 Min.)** | The teacher prepares handouts related to cross-cultural problematic situations encountered during a visit to a foreign country. Students are informed that there is no right or wrong answers and they should make some suggestions to solve the problems.<br><br>The teacher forms groups of 3-4 people. Each group takes one incident. Students read the incident first and then discuss possible reasons and solutions for the conflict.<br><br>After that, the incidents are discussed as a whole class and the teacher writes important ideas on the board. | **Board / Handouts** |
| **Task 2 (20 Min.)** | The teacher writes (1) hmmm (meaning: I didn't hear you), (2) hmmm (meaning: that's interesting), (3) umm-humm (meaning: yes or agreement), (4) umm-humm (meaning: no or disagreement), and (5) hmmm (meaning: pleasure or satisfaction). The teacher says each item emphasizing the intonation and explains their meanings to the students. Next, the teacher asks students to give similar examples in their native language. | **Board** |
| **Task 3 (30 Min.)** | In-class discussion group discusses gestures in the Turkish language and worldwide,<br><br>Online discussion group discusses gestures with the participants from other countries on Zoom under the supervision of the teacher. | **Board / Zoom** |

## LESSON PLAN (WEEK 5)

**Topic:** "Critical cultural awareness (savoir s'engager)"

### LESSON OBJECTIVE:

To increase students' critical cultural and intercultural awareness levels.

### PROCEDURE:

| Time | Introduction: | Tools |
|---|---|---|
| 20 Min. | Theoretical information about the concept of culture shock and the concept of stereotyping | PowerPoint |

| Time | Main Content: | Tools |
|---|---|---|
| Task 1 (20 Min.) | The teacher discusses the basic concepts of cultural adjustment wiith the class and gives some examples.<br><br>The teacher draws a diagram which shows the stages of culture shock on the board. The students are told that everybody experiences culture shock to some extent but the duration and severity change from one individual to another.<br><br>The students are asked to share whether they experience a similar culture shock. | Board |
| Task 2 (20 Min.) | The teacher forms group of 4 people.<br><br>The students are given pictures of various people and a set of job titles. They are asked to match the person with the correct job.<br><br>The teacher gives the correct answers and asks students whether they correctly guess the person and the job.<br><br>The class discusses about stereotyping people | Handouts |
| Task 3 (30 Min.) | In-class discussion group discusses various stereotypical images belonging to Turkish people and others,<br><br>Online discussion group makes the same discussion with participants from different countries on Zoom. | Board / Zoom |

**APPENDIX 10**

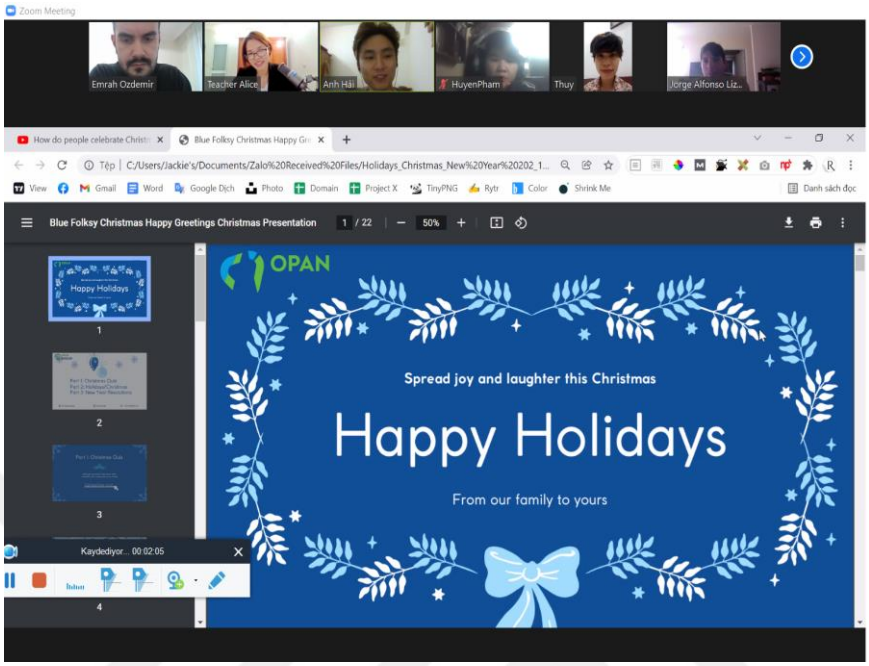
**Sample In-Class Instruction and Activity**

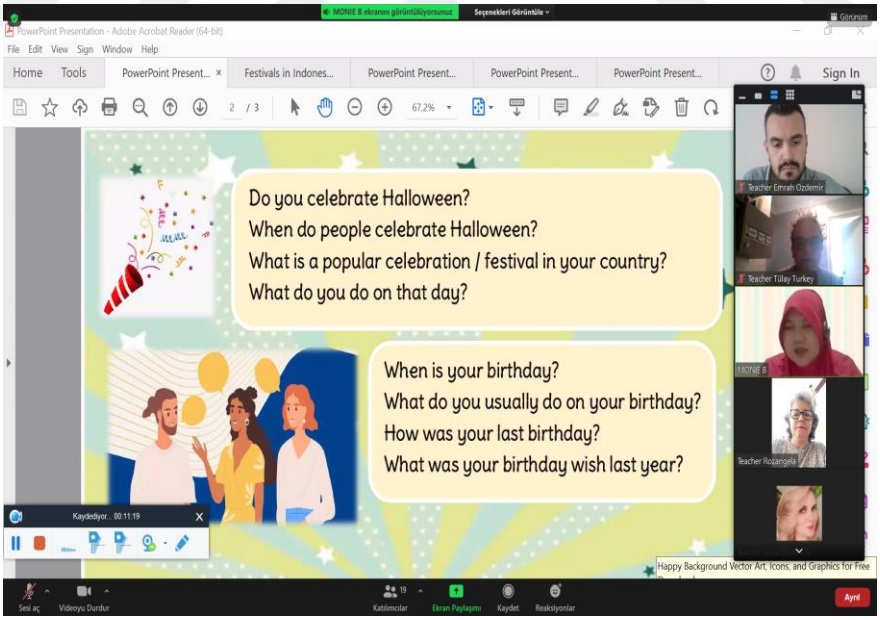





# APPENDIX 11

## Sample Online Intercultural Exchange



**APPENDIX 12**

**A Sample of Students' Writing**

A Letter To Myself

Dear Seda,

You have always wanted to be in New York. But, you should know that the life in New York is not same with the lifestyle in Turkey. Firstly, you will miss the Turkish food and you will have to get used to eat fast-food because this type of food is popular in New York. Then, you will be looking for some friends. I think it is not hard as looking for healthy food. You can have friends easily since the people there are so friendly. Lastly, you may have some financial issues. Thus, be prepared for that situation. That's all I want to say.

Be Safe!

## APPENDIX 13

## Interview Questions

**1-** Do you use social media?

**2-** What social media tools do you use?

**3-** Do you use social media tools for academic purposes?

**4-** How often do you use online tools for academic purposes?

**5-** How do you use online tools?

**6-** Do you think social media is useful for communicating with individuals from other cultures?

**7-** Do you think culture should be taught in classes?

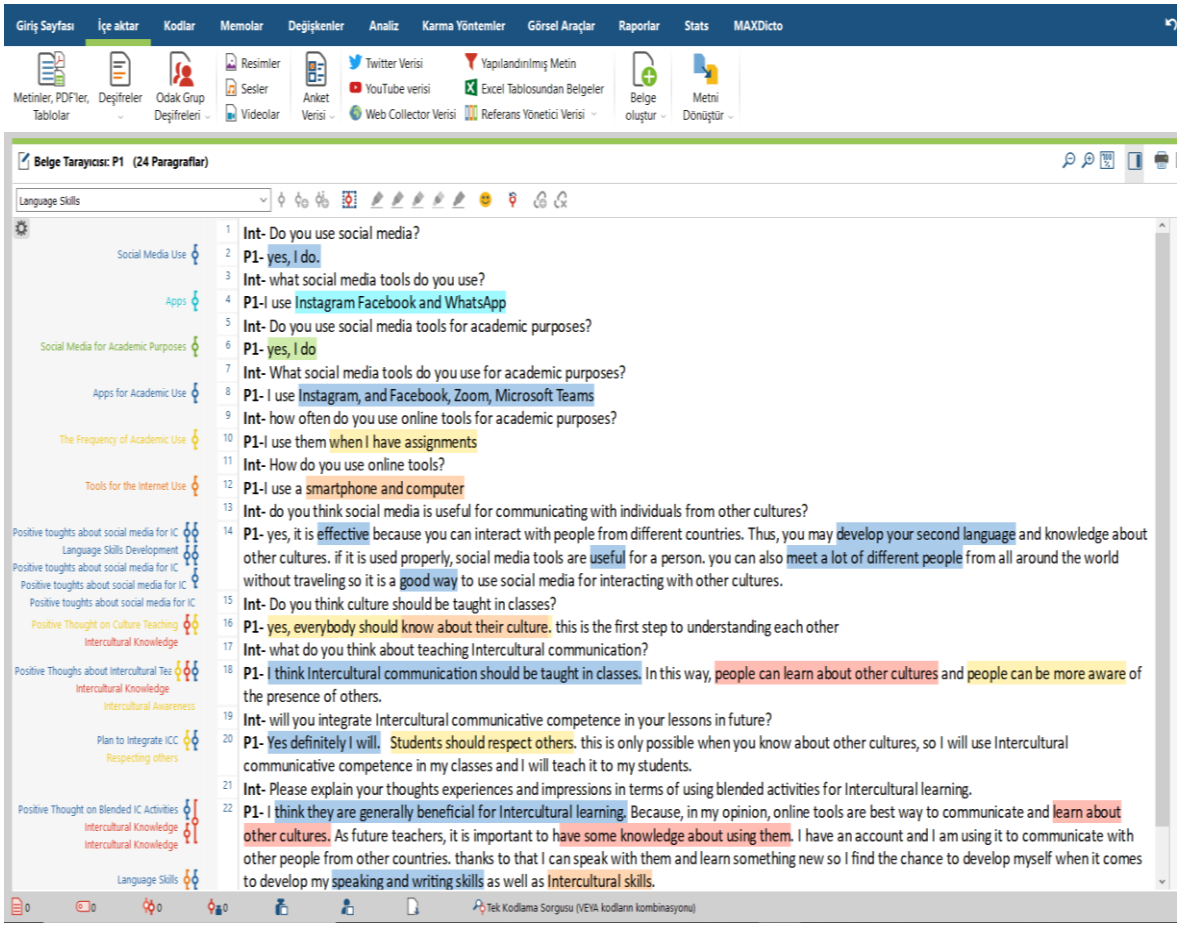
**8-** What do you think about teaching Intercultural communication?

**9-** Will you integrate Intercultural communicative competence in your lessons in future?

**10-** Please explain your thoughts experiences and impressions in terms of using blended activities for Intercultural learning.

# APPENDIX 14

## Content Analysis using Maxqda



## APPENDIX 15

## Emerging Themes as a result of Content Analysis

| Codes | Frequency |
|---|---|
| Anxiety | 2 |
| Problems | 3 |
| Cultural Knowledge | 5 |
| Intercultural Skills | 11 |
| Language Skills | 8 |
| Positive Thought on Blended IC Activities | 8 |
| Respecting others | 1 |
| Plan to Integrate ICC | 10 |
| Intercultural Awareness | 11 |
| Positive Thoughs about Intercultural Teaching | 10 |
| Intercultural Knowledge | 11 |
| Positive Thought on Culture Teaching | 10 |
| Language Skills Development | 1 |
| Positive toughts about social media for IC | 16 |
| Tools for the Internet Use | 6 |
| The Frequency of Academic Use | 10 |
| Apps for Academic Use | 10 |
| Social Media for Academic Purposes | 10 |
| Apps | 9 |
| Social Media Use | 10 |

## APPENDIX 16

## INSTITUTIONAL PERMISSIONS TO CONDUCT THE RESEARCH

T.C.
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ
SOSYAL BİLİMLER VE EĞİTİM BİLİMLERİ ETİK KURULU

PROJE/ARAŞTIRMA DEĞERLENDİRME SONUÇ RAPORU

| | |
|---|---|
| **Toplantı Tarihi** | 27.11. 2019 |
| **Toplantı Sayısı** | 10 |
| **Başvuru protokol numarası** | 2019/72 |
| **Başvuru tarihi** | 20.11.2019 |
| **Proje/araştırma başlığı** | The Effect of Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students |
| **Proje/araştırma yürütücüsü** | Emrah ÖZDEMİR |
| **Karar** | Bilimsel araştırma etik kurallarına uygundur |
| **Açıklamalar** | - |

T.C.
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ REKTÖRLÜĞÜ
Öğrenci İşleri Daire Başkanlığı

Sayı : 93130991-044-E.1900171133 25/11/2019
Konu : Anket İzni (Emrah ÖZDEMİR)

REKTÖRLÜK MAKAMINA

Üniversitemiz Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Bilim Dalı Doktora Programı öğrencisi Emrah ÖZDEMİR'in "The Effect of Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students" başlıklı tez çalışması kapsamında Üniversitemiz Eğitim Fakültesi İngilizce Öğretmenliği Bölümü öğrencilerine anket yapabilmesi için gerekli iznin verilmesine ilişkin Eğitim Bilimleri Enstitüsü'nün 22.11.2019 tarih ve 33813216-44-E.1900170224 sayılı yazısını olurlarınıza arz ederim.

İSTANBUL MEDENİYET ÜNİVERSİTESİ

**TASNİF DIŞI**

**T.C.**
**İSTANBUL MEDENİYET ÜNİVERSİTESİ**

Sayı : 42732473-200-E.210 14/01/2020
Konu : Anket Uygulama İzni

ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ REKTÖRLÜĞÜNE

Üniversiteniz Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Doktora Programı öğrencisi Emrah ÖZDEMİR'in "The Effect of Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students" başlıklı tez çalışması kapsamında Fakültemiz İngilizce Öğretmenliği Bölümü öğrencilerine anket uygulama isteği uygun bulunmuştur.

Bilgilerinize arz ederim.

T.C.
ATATÜRK ÜNİVERSİTESİ REKTÖRLÜĞÜ
Kâzım Karabekir Eğitim Fakültesi Dekanlığı

Sayı : 29202147-300-E.1900346674 02.12.2019
Konu : Anket İzni (Emrah ÖZDEMİR)

REKTÖRLÜK MAKAMINA
(Öğrenci İşleri Daire Başkanlığı)

İlgi : 27.11.2019 tarihli ve 88179374-300-E.1900337708 sayılı belge.

Çanakkale Onsekiz Mart Üniversitesi Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Bilim Dalı Doktora Programı öğrencisi Emrah ÖZDEMİR'in ***"The Effect of Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students"*** başlıklı tez çalışması kapsamında Fakültemiz Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi Anabilim Dalı öğrencilerine ilgi yazınız ekindeki anketi bizzat kendisi uygulaması şartı ilgili bölüm başkanlığınca ve Dekanlığımızca uygun görülmüştür.

Bilgilerinizi arz ederim.

T.C.
ALANYA ALAADDİN KEYKUBAT ÜNİVERSİTESİ
Yazı İşleri ve Evrak Şube Müdürlüğü

Sayı : 21514439-300-E.4257
Konu : Anket İzni

24/12/2019

ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ REKTÖRLÜĞÜNE
(Öğrenci İşleri Daire Başkanlığı)

İlgi : a) 25.11.2019 tarih ve bila sayılı yazınız.
b) Üniversitemiz Eğitim Fakültesi Dekanlığının 20.12.2019 tarih ve E.21394 sayılı yazısı.

Üniversiteniz Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı Doktora Programında, Prof. Dr. Dinçay KÖKSAL danışmanlığında eğitim gören Emrah ÖZDEMİR tarafından,"The Effectof Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students" konulu tez çalışmasına ilişkin ölçeklerin, Eğitim Fakültemizin İngilizce Öğretmenliği Lisans Programında öğrenim gören öğrencilere yönelik uygulanması talebiniz, ilgili Fakültemizin olumlu görüşü doğrultusunda uygun bulunmuştur.

Gereğini bilgilerinize arz ederim.

T.C.
**BURSA ULUDAĞ ÜNİVERSİTESİ REKTÖRLÜĞÜ**
**Genel Sekreterlik**

Sayı: 26468960-044/E.2758 21.01.2020
Konu: Anket İzni (Emrah ÖZDEMİR)

İlgi : 10.01.2020 tarihli ve 93130991-044-E.2000005996 sayılı yazınız.

Üniversiteniz Öğrenci İşleri Daire Başkanlığı'nın ilgi yazısında bahsi geçen Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Doktora Programı öğrencisi Emrah ÖZDEMİR'in "The Effect of Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students" konulu tez çalışması kapsamında Üniversitemiz Eğitim Fakültesinde uygulama yapma isteği Rektörlüğümüzce uygun bulunmuştur.

Bilgilerinize arz/rica ederim.

TASNİF DIŞI
T.C.
ONDOKUZ MAYIS ÜNİVERSİTESİ
**Rektörlük**

Sayı : 49933177-044-E.2222 27/01/2020
Konu : Anket İzni "Emrah ÖZDEMİR"

ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ REKTÖRLÜĞÜNE

**İlgi** : 10.01.2020 tarihli ve 93130991-044-2000005996 sayılı yazınız.

İlgide kayıtlı yazınız ile belirtilen Üniversiteniz Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Doktora Programı öğrencisi Emrah ÖZDEMİR'in "The Effect of Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students" başlıklı tez çalışması kapsamında Üniversitemiz Eğitim Fakültesi Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi öğrencilerine anket uygulaması yapma talebi uygun görülmüştür.

Bilgilerinizi ve gereğini arz ederim.

T.C.
BALIKESİR ÜNİVERSİTESİ
Necatibey Eğitim Fakültesi Dekanlığı

Sayı : E-70465693-300-187270 12.10.2022
Konu : Anket İzni

**REKTÖRLÜK MAKAMINA**
(Öğrenci İşleri Daire Başkanlığı)

İlgi : 07.10.2022 tarihli ve 28711322/044/186701 sayılı yazı.

Çanakkale Onsekiz Mart Üniversitesi Eğitim Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Doktora Programının 15291702007 No'lu Öğrencisi Emrah ÖZDEMİR'in **"The Effect of Blended Intercultural Instruction on Intercultural Communication Awareness and Anxiety Levels of EFL Students"** adlı tez çalışmasını Fakültemiz Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi Anabilim Dalında uygulama isteği Dekanlığımızca uygun görülmüştür.

Bilgilerinizi ve gereğini arz ederim.

# APPENDIX 17

## Tests of Normality

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| ICAN | 28 | 100,0% | 0 | 0,0% | 28 | 100,0% |

**Descriptives**

| | | | Statistic | Std. Error |
|---|---|---|---|---|
| ICAN | Mean | | 1,4286 | ,09524 |
| | 95% Confidence Interval for Mean | Lower Bound | 1,2332 | |
| | | Upper Bound | 1,6240 | |
| | 5% Trimmed Mean | | 1,4206 | |
| | Median | | 1,0000 | |
| | Variance | | ,254 | |
| | Std. Deviation | | ,50395 | |
| | Minimum | | 1,00 | |
| | Maximum | | 2,00 | |
| | Range | | 1,00 | |
| | Interquartile Range | | 1,00 | |
| | Skewness | | ,305 | ,441 |
| | Kurtosis | | -2,060 | ,858 |

**Tests of Normality**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| ICAN | ,374 | 28 | ,000 | ,631 | 28 | ,000 |

## APPENDIX 18

## SPSS Findings of the Main Study

### Wilcoxon Signed Rank Test Results of ICAN Scale for the Online discussion Group

**Ranks**

| | | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ICAN1post - ICAN1 | Negative Ranks | 21[a] | 11,69 | 245,50 |
| | Positive Ranks | 1[b] | 7,50 | 7,50 |
| | Ties | 6[c] | | |
| | Total | 28 | | |
| ICAN2post - ICAN2 | Negative Ranks | 19[d] | 11,13 | 211,50 |
| | Positive Ranks | 3[e] | 13,83 | 41,50 |
| | Ties | 6[f] | | |
| | Total | 28 | | |
| ICAN3post - ICAN3 | Negative Ranks | 20[g] | 13,75 | 275,00 |
| | Positive Ranks | 5[h] | 10,00 | 50,00 |
| | Ties | 3[i] | | |
| | Total | 28 | | |
| ICAN4post - ICAN4 | Negative Ranks | 18[j] | 11,50 | 207,00 |
| | Positive Ranks | 3[k] | 8,00 | 24,00 |
| | Ties | 7[l] | | |
| | Total | 28 | | |
| ICAN5post - ICAN5 | Negative Ranks | 20[m] | 13,48 | 269,50 |
| | Positive Ranks | 4[n] | 7,63 | 30,50 |
| | Ties | 4[o] | | |
| | Total | 28 | | |
| ICAN6post - ICAN6 | Negative Ranks | 18[p] | 11,56 | 208,00 |
| | Positive Ranks | 4[q] | 11,25 | 45,00 |
| | Ties | 6[r] | | |
| | Total | 28 | | |
| ICAN7post - ICAN7 | Negative Ranks | 20[s] | 12,60 | 252,00 |
| | Positive Ranks | 3[t] | 8,00 | 24,00 |
| | Ties | 5[u] | | |
| | Total | 28 | | |
| ICAN8post - ICAN8 | Negative Ranks | 23[v] | 13,30 | 306,00 |
| | Positive Ranks | 2[w] | 9,50 | 19,00 |
| | Ties | 3[x] | | |
| | Total | 28 | | |

| | | | | |
|---|---|---|---|---|
| ICAN9post - ICAN9 | Negative Ranks | 20[y] | 12,25 | 245,00 |
| | Positive Ranks | 2[z] | 4,00 | 8,00 |
| | Ties | 6[aa] | | |
| | Total | 28 | | |
| ICAN10post - ICAN10 | Negative Ranks | 21[ab] | 13,21 | 277,50 |
| | Positive Ranks | 3[ac] | 7,50 | 22,50 |
| | Ties | 4[ad] | | |
| | Total | 28 | | |
| ICAN11post - ICAN11 | Negative Ranks | 21[ae] | 12,86 | 270,00 |
| | Positive Ranks | 2[af] | 3,00 | 6,00 |
| | Ties | 5[ag] | | |
| | Total | 28 | | |
| ICAN12post - ICAN12 | Negative Ranks | 17[ah] | 11,85 | 201,50 |
| | Positive Ranks | 6[ai] | 12,42 | 74,50 |
| | Ties | 5[aj] | | |
| | Total | 28 | | |
| ICAN13post - ICAN13 | Negative Ranks | 21[ak] | 13,50 | 283,50 |
| | Positive Ranks | 4[al] | 10,38 | 41,50 |
| | Ties | 3[am] | | |
| | Total | 28 | | |
| ICAN14post - ICAN14 | Negative Ranks | 21[an] | 13,50 | 283,50 |
| | Positive Ranks | 3[ao] | 5,50 | 16,50 |
| | Ties | 4[ap] | | |
| | Total | 28 | | |
| ICAW15post - ICAN15 | Negative Ranks | 12[aq] | 8,21 | 98,50 |
| | Positive Ranks | 5[ar] | 10,90 | 54,50 |
| | Ties | 11[as] | | |
| | Total | 28 | | |
| ICAN16post - ICAN16 | Negative Ranks | 19[at] | 14,08 | 267,50 |
| | Positive Ranks | 5[au] | 6,50 | 32,50 |
| | Ties | 4[av] | | |
| | Total | 28 | | |

a. ICAN1post < ICAN1

b. ICAN1post > ICAN1

c. ICAN1post = ICAN1

d. ICAN2post < ICAN2

e. ICAN2post > ICAN2

f. ICAN2post = ICAN2

g. ICAN3post < ICAN3

h. ICAN3post > ICAN3

i. ICAN3post = ICAN3

j. ICAN4post < ICAN4

k. ICAN4post > ICAN4

l. ICAN4post = ICAN4

m. ICAN5post < ICAN5

n. ICAN5post > ICAN5

o. ICAN5post = ICAN5

p. ICAN6post < ICAN6

q. ICAN6post > ICAN6

r. ICAN6post = ICAN6

s. ICAN7post < ICAN7

t. ICAN7post > ICAN7

u. ICAN7post = ICAN7

v. ICAN8post < ICAN8

w. ICAN8post > ICAN8

x. ICAN8post = ICAN8

y. ICAN9post < ICAN9

z. ICAN9post > ICAN9

aa. ICAN9post = ICAN9

ab. ICAN10post < ICAN10

ac. ICAN10post > ICAN10

ad. ICAN10post = ICAN10

ae. ICAN11post < ICAN11

af. ICAN11post > ICAN11

ag. ICAN11post = ICAN11

ah. ICAN12post < ICAN12

ai. ICAN12post > ICAN12

aj. ICAN12post = ICAN12

ak. ICAN13post < ICAN13

al. ICAN13post > ICAN13

am. ICAN13post = ICAN13

an. ICAN14post < ICAN14

ao. ICAN14post > ICAN14

ap. ICAN14post = ICAN14

aq. ICAW15post < ICAN15

ar. ICAW15post > ICAN15

as. ICAW15post = ICAN15

at. ICAN16post < ICAN16

au. ICAN16post > ICAN16

av. ICAN16post = ICAN16

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| ICAN1 | 28 | 2,9643 | ,50787 | 2,00 | 4,00 |
| ICAN2 | 28 | 3,3571 | ,73102 | 2,00 | 5,00 |
| ICAN3 | 28 | 3,4643 | ,92224 | 1,00 | 5,00 |
| ICAN4 | 28 | 4,2500 | ,70053 | 3,00 | 5,00 |
| ICAN5 | 28 | 4,2857 | ,76290 | 2,00 | 5,00 |
| ICAN6 | 28 | 4,1786 | ,86297 | 2,00 | 5,00 |
| ICAN7 | 28 | 3,7143 | ,65868 | 3,00 | 5,00 |
| ICAN8 | 28 | 3,9643 | ,50787 | 3,00 | 5,00 |
| ICAN9 | 28 | 4,4286 | ,87891 | 2,00 | 5,00 |
| ICAN10 | 28 | 4,3929 | ,78595 | 2,00 | 5,00 |
| ICAN11 | 28 | 4,0714 | ,71640 | 2,00 | 5,00 |
| ICAN12 | 28 | 3,6071 | ,68526 | 2,00 | 5,00 |
| ICAN13 | 28 | 4,0000 | ,76980 | 2,00 | 5,00 |
| ICAN14 | 28 | 3,5357 | ,79266 | 1,00 | 4,00 |
| ICAN15 | 28 | 4,3214 | ,94491 | 2,00 | 5,00 |
| ICAN16 | 28 | 3,8214 | ,77237 | 2,00 | 5,00 |
| ICAN1post | 28 | 1,9643 | ,57620 | 1,00 | 3,00 |
| ICAN2post | 28 | 2,5714 | ,74180 | 1,00 | 4,00 |
| ICAN3post | 28 | 2,4643 | ,92224 | 1,00 | 4,00 |
| ICAN4post | 28 | 3,4286 | ,92009 | 1,00 | 5,00 |
| ICAN5post | 28 | 3,1429 | 1,07890 | 2,00 | 5,00 |
| ICAN6post | 28 | 3,3214 | 1,12393 | 2,00 | 5,00 |
| ICAN7post | 28 | 2,5000 | 1,07152 | 1,00 | 5,00 |
| ICAN8post | 28 | 2,8571 | ,75593 | 1,00 | 4,00 |
| ICAN9post | 28 | 3,0000 | ,86066 | 1,00 | 4,00 |
| ICAN10post | 28 | 3,1429 | 1,00791 | 1,00 | 5,00 |
| ICAN11post | 28 | 2,4643 | ,99934 | 1,00 | 4,00 |
| ICAN12post | 28 | 3,1786 | ,77237 | 2,00 | 5,00 |
| ICAN13post | 28 | 3,0000 | ,81650 | 2,00 | 4,00 |
| ICAN14post | 28 | 2,2143 | ,78680 | 1,00 | 4,00 |
| ICAW15post | 28 | 4,1071 | ,73733 | 3,00 | 5,00 |
| ICAN16post | 28 | 2,8214 | ,86297 | 2,00 | 5,00 |

**Test Statistics[a]**

| | ICAN1post - ICAN1 | ICAN2post - ICAN2 | ICAN3post - ICAN3 | ICAN4post - ICAN4 | ICAN5post - ICAN5 | ICAN6post - ICAN6 | ICAN7post - ICAN7 | ICAN8post - ICAN8 | ICAN9post - ICAN9 | ICAN10post - ICAN10 | ICAN11post - ICAN11 | ICAN12post - ICAN12 | ICAN13post - ICAN13 | ICAN14post - ICAN14 | ICAW15post - ICAN15 | ICAN16post - ICAN16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | -4,008[b] | -2,845[b] | -3,113[b] | -3,327[b] | -3,488[b] | -2,717[b] | -3,521[b] | -4,045[b] | -3,898[b] | -3,736[b] | -4,079[b] | -2,100[b] | -3,344[b] | -3,875[b] | -1,116[b] | -3,437[b] |
| Asymp. Sig. (2-tailed) | ,000 | ,004 | ,002 | ,001 | ,000 | ,007 | ,000 | ,000 | ,000 | ,000 | ,000 | ,036 | ,001 | ,000 | ,265 | ,001 |

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

## Wilcoxon Signed Rank Test Results of the ICAN Scale for the In-class Discussion Group

**Ranks**

| | | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ICAN1post - ICAN1 | Negative Ranks | 7[a] | 5,43 | 38,00 |
| | Positive Ranks | 3[b] | 5,67 | 17,00 |
| | Ties | 18[c] | | |
| | Total | 28 | | |
| ICAN2post - ICAN2 | Negative Ranks | 8[d] | 6,38 | 51,00 |
| | Positive Ranks | 4[e] | 6,75 | 27,00 |
| | Ties | 16[f] | | |
| | Total | 28 | | |

| | | | | |
|---|---|---|---|---|
| ICAN3post - ICAN3 | Negative Ranks | 8[g] | 4,69 | 37,50 |
| | Positive Ranks | 1[h] | 7,50 | 7,50 |
| | Ties | 19[i] | | |
| | Total | 28 | | |
| ICAN4post - ICAN4 | Negative Ranks | 5[j] | 3,60 | 18,00 |
| | Positive Ranks | 1[k] | 3,00 | 3,00 |
| | Ties | 22[l] | | |
| | Total | 28 | | |
| ICAN5post - ICAN5 | Negative Ranks | 5[m] | 5,10 | 25,50 |
| | Positive Ranks | 3[n] | 3,50 | 10,50 |
| | Ties | 20[o] | | |
| | Total | 28 | | |
| ICAN6post - ICAN6 | Negative Ranks | 5[p] | 4,70 | 23,50 |
| | Positive Ranks | 3[q] | 4,17 | 12,50 |
| | Ties | 20[r] | | |
| | Total | 28 | | |
| ICAN7post - ICAN7 | Negative Ranks | 8[s] | 6,44 | 51,50 |
| | Positive Ranks | 3[t] | 4,83 | 14,50 |
| | Ties | 17[u] | | |
| | Total | 28 | | |
| ICAN8post - ICAN8 | Negative Ranks | 7[v] | 6,14 | 43,00 |
| | Positive Ranks | 4[w] | 5,75 | 23,00 |
| | Ties | 17[x] | | |
| | Total | 28 | | |
| ICAN9post - ICAN9 | Negative Ranks | 6[y] | 6,33 | 38,00 |
| | Positive Ranks | 5[z] | 5,60 | 28,00 |
| | Ties | 17[aa] | | |
| | Total | 28 | | |
| ICAN10post - ICAN10 | Negative Ranks | 6[ab] | 7,75 | 46,50 |
| | Positive Ranks | 6[ac] | 5,25 | 31,50 |
| | Ties | 16[ad] | | |
| | Total | 28 | | |
| ICAN11post - ICAN11 | Negative Ranks | 6[ae] | 8,00 | 48,00 |
| | Positive Ranks | 6[af] | 5,00 | 30,00 |
| | Ties | 16[ag] | | |
| | Total | 28 | | |
| ICAN12post - ICAN12 | Negative Ranks | 4[ah] | 5,25 | 21,00 |
| | Positive Ranks | 6[ai] | 5,67 | 34,00 |
| | Ties | 18[aj] | | |
| | Total | 28 | | |
| ICAN13post - ICAN13 | Negative Ranks | 6[ak] | 5,33 | 32,00 |
| | Positive Ranks | 5[al] | 6,80 | 34,00 |

| | | | | |
|---|---|---|---|---|
| | Ties | 17[am] | | |
| | Total | 28 | | |
| ICAN14post - ICAN14 | Negative Ranks | 9[an] | 7,44 | 67,00 |
| | Positive Ranks | 4[ao] | 6,00 | 24,00 |
| | Ties | 15[ap] | | |
| | Total | 28 | | |
| ICAW15post - ICAN15 | Negative Ranks | 19[aq] | 12,21 | 232,00 |
| | Positive Ranks | 5[ar] | 13,60 | 68,00 |
| | Ties | 4[as] | | |
| | Total | 28 | | |
| ICAN16post - ICAN16 | Negative Ranks | 4[at] | 5,00 | 20,00 |
| | Positive Ranks | 4[au] | 4,00 | 16,00 |
| | Ties | 20[av] | | |
| | Total | 28 | | |

a. ICAN1post < ICAN1

b. ICAN1post > ICAN1

c. ICAN1post = ICAN1

d. ICAN2post < ICAN2

e. ICAN2post > ICAN2

f. ICAN2post = ICAN2

g. ICAN3post < ICAN3

h. ICAN3post > ICAN3

i. ICAN3post = ICAN3

j. ICAN4post < ICAN4

k. ICAN4post > ICAN4

l. ICAN4post = ICAN4

m. ICAN5post < ICAN5

n. ICAN5post > ICAN5

o. ICAN5post = ICAN5

p. ICAN6post < ICAN6

q. ICAN6post > ICAN6

r. ICAN6post = ICAN6

s. ICAN7post < ICAN7

t. ICAN7post > ICAN7

u. ICAN7post = ICAN7

v. ICAN8post < ICAN8

w. ICAN8post > ICAN8

x. ICAN8post = ICAN8

y. ICAN9post < ICAN9

z. ICAN9post > ICAN9

aa. ICAN9post = ICAN9

ab. ICAN10post < ICAN10

ac. ICAN10post > ICAN10

ad. ICAN10post = ICAN10

ae. ICAN11post < ICAN11

af. ICAN11post > ICAN11

ag. ICAN11post = ICAN11

ah. ICAN12post < ICAN12

ai. ICAN12post > ICAN12

aj. ICAN12post = ICAN12

ak. ICAN13post < ICAN13

al. ICAN13post > ICAN13

am. ICAN13post = ICAN13

an. ICAN14post < ICAN14

ao. ICAN14post > ICAN14

ap. ICAN14post = ICAN14

aq. ICAW15post < ICAN15

ar. ICAW15post > ICAN15

as. ICAW15post = ICAN15

at. ICAN16post < ICAN16

au. ICAN16post > ICAN16

av. ICAN16post = ICAN16

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ICAN1 | 28 | 2,8214 | ,61183 | 2,00 | 4,00 |
| ICAN2 | 28 | 3,3929 | ,68526 | 2,00 | 5,00 |
| ICAN3 | 28 | 3,5714 | ,83571 | 1,00 | 5,00 |
| ICAN4 | 28 | 4,2500 | ,70053 | 3,00 | 5,00 |
| ICAN5 | 28 | 4,2143 | ,87590 | 2,00 | 5,00 |
| ICAN6 | 28 | 4,1071 | ,99403 | 2,00 | 5,00 |
| ICAN7 | 28 | 3,6429 | ,86984 | 2,00 | 5,00 |
| ICAN8 | 28 | 3,7857 | ,73822 | 2,00 | 5,00 |
| ICAN9 | 28 | 4,2143 | ,95674 | 2,00 | 5,00 |
| ICAN10 | 28 | 4,2500 | ,96705 | 2,00 | 5,00 |
| ICAN11 | 28 | 3,7857 | ,87590 | 2,00 | 5,00 |
| ICAN12 | 28 | 3,1786 | ,98333 | 1,00 | 5,00 |
| ICAN13 | 28 | 3,7143 | ,89679 | 2,00 | 5,00 |
| ICAN14 | 28 | 3,3571 | ,78004 | 1,00 | 4,00 |
| ICAN15 | 28 | 4,2500 | 1,00462 | 2,00 | 5,00 |
| ICAN16 | 28 | 3,6071 | ,91649 | 2,00 | 5,00 |
| ICAN1post | 28 | 2,6429 | ,82616 | 1,00 | 4,00 |

| | | | | | |
|---|---|---|---|---|---|
| ICAN2post | 28 | 3,2500 | ,84437 | 2,00 | 5,00 |
| ICAN3post | 28 | 3,2500 | ,92796 | 1,00 | 5,00 |
| ICAN4post | 28 | 4,0714 | ,85758 | 2,00 | 5,00 |
| ICAN5post | 28 | 4,0714 | ,97861 | 2,00 | 5,00 |
| ICAN6post | 28 | 3,9643 | ,96156 | 2,00 | 5,00 |
| ICAN7post | 28 | 3,3214 | ,86297 | 2,00 | 5,00 |
| ICAN8post | 28 | 3,6071 | ,83174 | 2,00 | 5,00 |
| ICAN9post | 28 | 4,1071 | 1,19689 | 2,00 | 5,00 |
| ICAN10post | 28 | 4,1429 | 1,00791 | 2,00 | 5,00 |
| ICAN11post | 28 | 3,6786 | 1,02030 | 2,00 | 5,00 |
| ICAN12post | 28 | 3,2857 | ,93718 | 1,00 | 5,00 |
| ICAN13post | 28 | 3,7143 | 1,01314 | 2,00 | 5,00 |
| ICAN14post | 28 | 3,1071 | 1,10014 | 1,00 | 5,00 |
| ICAW15post | 28 | 3,5714 | ,83571 | 1,00 | 5,00 |
| ICAN16post | 28 | 3,5714 | ,92009 | 2,00 | 5,00 |

**Test Statistics[a]**

| | ICAN1post - ICAN1 | ICAN2post - ICAN2 | ICAN3post - ICAN3 | ICAN4post - ICAN4 | ICAN5post - ICAN5 | ICAN6post - ICAN6 | ICAN7post - ICAN7 | ICAN8post - ICAN8 | ICAN9post - ICAN9 | ICAN10post - ICAN10 | ICAN11post - ICAN11 | ICAN12post - ICAN12 | ICAN13post - ICAN13 | ICAN14post - ICAN14 | ICAW15post - ICAN15 | ICAN16post - ICAN16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | -1,115[b] | -,988[b] | -1,826[b] | -1,667[b] | -1,100[b] | -,791[b] | -1,691[b] | -,929[b] | -,454[b] | -,603[b] | -,728[b] | -,690[c] | -,091[c] | -1,615[b] | -2,433[b] | -,289[b] |
| Asymp. Sig. (2-tailed) | ,265 | ,323 | ,068 | ,096 | ,271 | ,429 | ,091 | ,353 | ,650 | ,547 | ,467 | ,490 | ,927 | ,106 | ,015 | ,773 |

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

## Wilcoxon Signed Rank Test Results of ICAW Scale for the Online discussion Group

**Ranks**

| | | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ICAW1post - ICAW1 | Negative Ranks | 3[a] | 7,50 | 22,50 |
| | Positive Ranks | 20[b] | 12,68 | 253,50 |
| | Ties | 5[c] | | |
| | Total | 28 | | |
| ICAW3post - ICAW2 | Negative Ranks | 4[d] | 10,50 | 42,00 |
| | Positive Ranks | 17[e] | 11,12 | 189,00 |
| | Ties | 7[f] | | |
| | Total | 28 | | |
| ICAW3post - ICAW3 | Negative Ranks | 3[g] | 8,00 | 24,00 |
| | Positive Ranks | 20[h] | 12,60 | 252,00 |
| | Ties | 5[i] | | |
| | Total | 28 | | |
| ICAW4post - ICAW4 | Negative Ranks | 1[j] | 6,00 | 6,00 |
| | Positive Ranks | 21[k] | 11,76 | 247,00 |
| | Ties | 6[l] | | |
| | Total | 28 | | |
| ICAW5post - ICAW5 | Negative Ranks | 2[m] | 9,75 | 19,50 |
| | Positive Ranks | 19[n] | 11,13 | 211,50 |
| | Ties | 7[o] | | |
| | Total | 28 | | |
| ICAW6post - ICAW6 | Negative Ranks | 1[p] | 6,00 | 6,00 |
| | Positive Ranks | 24[q] | 13,29 | 319,00 |
| | Ties | 3[r] | | |
| | Total | 28 | | |
| ICAW7post - ICAW7 | Negative Ranks | 4[s] | 7,00 | 28,00 |
| | Positive Ranks | 21[t] | 14,14 | 297,00 |
| | Ties | 3[u] | | |
| | Total | 28 | | |
| ICAW8post - ICAW8 | Negative Ranks | 4[v] | 8,00 | 32,00 |
| | Positive Ranks | 20[w] | 13,40 | 268,00 |
| | Ties | 4[x] | | |
| | Total | 28 | | |
| ICAW9post - ICAW9 | Negative Ranks | 2[y] | 5,00 | 10,00 |
| | Positive Ranks | 21[z] | 12,67 | 266,00 |
| | Ties | 5[aa] | | |
| | Total | 28 | | |

| | | | | |
|---|---|---|---|---|
| ICAW10post - ICAW10 | Negative Ranks | 3[ab] | 8,33 | 25,00 |
| | Positive Ranks | 18[ac] | 11,44 | 206,00 |
| | Ties | 7[ad] | | |
| | Total | 28 | | |
| ICAW11post - ICAW11 | Negative Ranks | 3[ae] | 5,00 | 15,00 |
| | Positive Ranks | 18[af] | 12,00 | 216,00 |
| | Ties | 7[ag] | | |
| | Total | 28 | | |
| ICAW12post - ICAW12 | Negative Ranks | 0[ah] | ,00 | ,00 |
| | Positive Ranks | 20[ai] | 10,50 | 210,00 |
| | Ties | 8[aj] | | |
| | Total | 28 | | |
| ICAW13post - ICAW13 | Negative Ranks | 2[ak] | 9,25 | 18,50 |
| | Positive Ranks | 19[al] | 11,18 | 212,50 |
| | Ties | 7[am] | | |
| | Total | 28 | | |
| ICAW14post - ICAW14 | Negative Ranks | 1[an] | 5,00 | 5,00 |
| | Positive Ranks | 20[ao] | 11,30 | 226,00 |
| | Ties | 7[ap] | | |
| | Total | 28 | | |
| ICAW15post - ICAW15 | Negative Ranks | 2[aq] | 4,50 | 9,00 |
| | Positive Ranks | 14[ar] | 9,07 | 127,00 |
| | Ties | 12[as] | | |
| | Total | 28 | | |
| ICAW16post - ICAW16 | Negative Ranks | 2[at] | 6,00 | 12,00 |
| | Positive Ranks | 18[au] | 11,00 | 198,00 |
| | Ties | 8[av] | | |
| | Total | 28 | | |

a. ICAW1post < ICAW1

b. ICAW1post > ICAW1

c. ICAW1post = ICAW1

d. ICAW3post < ICAW2

e. ICAW3post > ICAW2

f. ICAW3post = ICAW2

g. ICAW3post < ICAW3

h. ICAW3post > ICAW3

i. ICAW3post = ICAW3

j. ICAW4post < ICAW4

k. ICAW4post > ICAW4

l. ICAW4post = ICAW4

m. ICAW5post < ICAW5

n. ICAW5post > ICAW5

o. ICAW5post = ICAW5

p. ICAW6post < ICAW6

q. ICAW6post > ICAW6

r. ICAW6post = ICAW6

s. ICAW7post < ICAW7

t. ICAW7post > ICAW7

u. ICAW7post = ICAW7

v. ICAW8post < ICAW8

w. ICAW8post > ICAW8

x. ICAW8post = ICAW8

y. ICAW9post < ICAW9

z. ICAW9post > ICAW9

aa. ICAW9post = ICAW9

ab. ICAW10post < ICAW10

ac. ICAW10post > ICAW10

ad. ICAW10post = ICAW10

ae. ICAW11post < ICAW11

af. ICAW11post > ICAW11

ag. ICAW11post = ICAW11

ah. ICAW12post < ICAW12

ai. ICAW12post > ICAW12

aj. ICAW12post = ICAW12

ak. ICAW13post < ICAW13

al. ICAW13post > ICAW13

am. ICAW13post = ICAW13

an. ICAW14post < ICAW14

ao. ICAW14post > ICAW14

ap. ICAW14post = ICAW14

aq. ICAW15post < ICAW15

ar. ICAW15post > ICAW15

as. ICAW15post = ICAW15

at. ICAW16post < ICAW16

au. ICAW16post > ICAW16

av. ICAW16post = ICAW16

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ICAW1 | 28 | 3,3214 | ,54796 | 2,00 | 4,00 |
| ICAW2 | 28 | 3,2857 | ,71270 | 2,00 | 4,00 |
| ICAW3 | 28 | 3,1071 | ,56695 | 2,00 | 4,00 |

| | | | | | |
|---|---|---|---|---|---|
| ICAW4 | 28 | 2,2857 | ,85449 | 1,00 | 4,00 |
| ICAW5 | 28 | 2,3571 | ,67847 | 1,00 | 4,00 |
| ICAW6 | 28 | 2,3929 | ,62889 | 2,00 | 4,00 |
| ICAW7 | 28 | 2,3214 | ,66964 | 1,00 | 4,00 |
| ICAW8 | 28 | 3,2857 | ,59982 | 2,00 | 4,00 |
| ICAW9 | 28 | 3,1071 | ,62889 | 2,00 | 4,00 |
| ICAW10 | 28 | 2,6786 | ,66964 | 1,00 | 4,00 |
| ICAW11 | 28 | 2,5000 | ,74536 | 1,00 | 4,00 |
| ICAW12 | 28 | 3,1071 | ,56695 | 2,00 | 4,00 |
| ICAW13 | 28 | 2,8571 | ,65060 | 2,00 | 4,00 |
| ICAW14 | 28 | 2,9643 | ,50787 | 2,00 | 4,00 |
| ICAW15 | 28 | 3,3214 | ,72283 | 1,00 | 4,00 |
| ICAW16 | 28 | 3,1071 | ,68526 | 2,00 | 4,00 |
| ICAW1post | 28 | 4,2857 | ,71270 | 3,00 | 5,00 |
| ICAW3post | 28 | 4,0357 | ,96156 | 1,00 | 5,00 |
| ICAW4post | 28 | 3,6071 | ,83174 | 2,00 | 5,00 |
| ICAW5post | 28 | 3,3929 | ,91649 | 1,00 | 5,00 |
| ICAW6post | 28 | 3,7857 | ,78680 | 2,00 | 5,00 |
| ICAW7post | 28 | 3,4286 | 1,06904 | 1,00 | 5,00 |
| ICAW8post | 28 | 4,2143 | ,78680 | 3,00 | 5,00 |
| ICAW9post | 28 | 4,3571 | ,73102 | 3,00 | 5,00 |
| ICAW10post | 28 | 3,6071 | ,91649 | 2,00 | 5,00 |
| ICAW11post | 28 | 3,5714 | ,95950 | 1,00 | 5,00 |
| ICAW12post | 28 | 4,3214 | ,72283 | 3,00 | 5,00 |
| ICAW13post | 28 | 3,9286 | ,89974 | 2,00 | 5,00 |
| ICAW14post | 28 | 4,1071 | ,91649 | 2,00 | 5,00 |
| ICAW15post | 28 | 4,1071 | ,73733 | 3,00 | 5,00 |
| ICAW16post | 28 | 4,0714 | ,71640 | 3,00 | 5,00 |

**Test Statistics[a]**

| | ICAW1post - ICAW1 | ICAW3post - ICAW2 | ICAW3post - ICAW3 | ICAW4post - ICAW4 | ICAW5post - ICAW5 | ICAW6post - ICAW6 | ICAW7post - ICAW7 | ICAW8post - ICAW8 | ICAW9post - ICAW9 | ICAW10post - ICAW10 | ICAW11post - ICAW11 | ICAW12post - ICAW12 | ICAW13post - ICAW13 | ICAW14post - ICAW14 | ICAW15post - ICAW15 | ICAW16post - ICAW16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | -3,628[b] | -2,621[b] | -3,598[b] | -3,982[b] | -3,411[b] | -4,311[b] | -3,709[b] | -3,488[b] | -3,988[b] | -3,230[b] | -3,559[b] | -3,993[b] | -3,452[b] | -3,943[b] | -3,125[b] | -3,559[b] |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asymp. Sig. (2-tailed) | ,000 | ,009 | ,000 | ,000 | ,001 | ,000 | ,000 | ,000 | ,000 | ,001 | ,000 | ,000 | ,001 | ,000 | ,002 | ,000 |

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

## Wilcoxon Signed Rank Test Results of ICAW Scale for the In-class Discussion Group

**Ranks**

| | | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ICAW1post - ICAW1 | Negative Ranks | 4[a] | 4,00 | 16,00 |
| | Positive Ranks | 5[b] | 5,80 | 29,00 |
| | Ties | 19[c] | | |
| | Total | 28 | | |
| ICAW3post - ICAW2 | Negative Ranks | 10[d] | 7,85 | 78,50 |
| | Positive Ranks | 7[e] | 10,64 | 74,50 |
| | Ties | 11[f] | | |
| | Total | 28 | | |
| ICAW3post - ICAW3 | Negative Ranks | 3[g] | 5,00 | 15,00 |
| | Positive Ranks | 7[h] | 5,71 | 40,00 |
| | Ties | 18[i] | | |
| | Total | 28 | | |
| ICAW4post - ICAW4 | Negative Ranks | 3[j] | 5,83 | 17,50 |
| | Positive Ranks | 8[k] | 6,06 | 48,50 |
| | Ties | 17[l] | | |
| | Total | 28 | | |
| ICAW5post - ICAW5 | Negative Ranks | 4[m] | 5,88 | 23,50 |
| | Positive Ranks | 9[n] | 7,50 | 67,50 |

| | | | | |
|---|---|---|---|---|
| | Ties | 15[o] | | |
| | Total | 28 | | |
| ICAW6post - ICAW6 | Negative Ranks | 5[p] | 3,50 | 17,50 |
| | Positive Ranks | 5[q] | 7,50 | 37,50 |
| | Ties | 18[r] | | |
| | Total | 28 | | |
| ICAW7post - ICAW7 | Negative Ranks | 2[s] | 6,00 | 12,00 |
| | Positive Ranks | 8[t] | 5,38 | 43,00 |
| | Ties | 18[u] | | |
| | Total | 28 | | |
| ICAW8post - ICAW8 | Negative Ranks | 4[v] | 5,88 | 23,50 |
| | Positive Ranks | 7[w] | 6,07 | 42,50 |
| | Ties | 17[x] | | |
| | Total | 28 | | |
| ICAW9post - ICAW9 | Negative Ranks | 2[y] | 5,75 | 11,50 |
| | Positive Ranks | 7[z] | 4,79 | 33,50 |
| | Ties | 19[aa] | | |
| | Total | 28 | | |
| ICAW10post - ICAW10 | Negative Ranks | 3[ab] | 7,50 | 22,50 |
| | Positive Ranks | 9[ac] | 6,17 | 55,50 |
| | Ties | 16[ad] | | |
| | Total | 28 | | |
| ICAW11post - ICAW11 | Negative Ranks | 3[ae] | 5,00 | 15,00 |
| | Positive Ranks | 7[af] | 5,71 | 40,00 |
| | Ties | 18[ag] | | |
| | Total | 28 | | |
| ICAW12post - ICAW12 | Negative Ranks | 1[ah] | 3,00 | 3,00 |
| | Positive Ranks | 5[ai] | 3,60 | 18,00 |
| | Ties | 22[aj] | | |
| | Total | 28 | | |
| ICAW13post - ICAW13 | Negative Ranks | 6[ak] | 5,50 | 33,00 |
| | Positive Ranks | 6[al] | 7,50 | 45,00 |
| | Ties | 16[am] | | |
| | Total | 28 | | |
| ICAW14post - ICAW14 | Negative Ranks | 2[an] | 3,00 | 6,00 |
| | Positive Ranks | 6[ao] | 5,00 | 30,00 |
| | Ties | 20[ap] | | |
| | Total | 28 | | |
| ICAW15post - ICAW15 | Negative Ranks | 1[aq] | 5,00 | 5,00 |
| | Positive Ranks | 9[ar] | 5,56 | 50,00 |
| | Ties | 18[as] | | |
| | Total | 28 | | |

| | | | | |
|---|---|---|---|---|
| ICAW16post - ICAW16 | Negative Ranks | 1[at] | 3,00 | 3,00 |
| | Positive Ranks | 6[au] | 4,17 | 25,00 |
| | Ties | 21[av] | | |
| | Total | 28 | | |

a. ICAW1post < ICAW1

b. ICAW1post > ICAW1

c. ICAW1post = ICAW1

d. ICAW3post < ICAW2

e. ICAW3post > ICAW2

f. ICAW3post = ICAW2

g. ICAW3post < ICAW3

h. ICAW3post > ICAW3

i. ICAW3post = ICAW3

j. ICAW4post < ICAW4

k. ICAW4post > ICAW4

l. ICAW4post = ICAW4

m. ICAW5post < ICAW5

n. ICAW5post > ICAW5

o. ICAW5post = ICAW5

p. ICAW6post < ICAW6

q. ICAW6post > ICAW6

r. ICAW6post = ICAW6

s. ICAW7post < ICAW7

t. ICAW7post > ICAW7

u. ICAW7post = ICAW7

v. ICAW8post < ICAW8

w. ICAW8post > ICAW8

x. ICAW8post = ICAW8

y. ICAW9post < ICAW9

z. ICAW9post > ICAW9

aa. ICAW9post = ICAW9

ab. ICAW10post < ICAW10

ac. ICAW10post > ICAW10

ad. ICAW10post = ICAW10

ae. ICAW11post < ICAW11

af. ICAW11post > ICAW11

ag. ICAW11post = ICAW11

ah. ICAW12post < ICAW12

ai. ICAW12post > ICAW12

aj. ICAW12post = ICAW12

ak. ICAW13post < ICAW13

al. ICAW13post > ICAW13

am. ICAW13post = ICAW13

an. ICAW14post < ICAW14

ao. ICAW14post > ICAW14

ap. ICAW14post = ICAW14

aq. ICAW15post < ICAW15

ar. ICAW15post > ICAW15

as. ICAW15post = ICAW15

at. ICAW16post < ICAW16

au. ICAW16post > ICAW16

av. ICAW16post = ICAW16

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ICAW1 | 28 | 3,3929 | ,56695 | 2,00 | 4,00 |
| ICAW2 | 28 | 3,4286 | ,63413 | 2,00 | 4,00 |
| ICAW3 | 28 | 3,1429 | ,65060 | 2,00 | 4,00 |
| ICAW4 | 28 | 2,4286 | ,83571 | 1,00 | 4,00 |
| ICAW5 | 28 | 2,3571 | ,82616 | 1,00 | 4,00 |
| ICAW6 | 28 | 2,6786 | ,86297 | 2,00 | 4,00 |
| ICAW7 | 28 | 2,1786 | ,90487 | 1,00 | 4,00 |
| ICAW8 | 28 | 3,3214 | ,66964 | 2,00 | 4,00 |
| ICAW9 | 28 | 3,3214 | ,61183 | 2,00 | 4,00 |
| ICAW10 | 28 | 2,6071 | ,73733 | 1,00 | 4,00 |
| ICAW11 | 28 | 2,6429 | ,82616 | 1,00 | 4,00 |
| ICAW12 | 28 | 3,3929 | ,56695 | 2,00 | 4,00 |
| ICAW13 | 28 | 3,1071 | ,73733 | 2,00 | 4,00 |
| ICAW14 | 28 | 3,0714 | ,76636 | 1,00 | 4,00 |
| ICAW15 | 28 | 3,2143 | ,83254 | 1,00 | 4,00 |
| ICAW16 | 28 | 3,2500 | ,58531 | 2,00 | 4,00 |
| ICAW1post | 28 | 3,5000 | ,79349 | 2,00 | 5,00 |
| ICAW3post | 28 | 3,3929 | ,87514 | 2,00 | 5,00 |
| ICAW4post | 28 | 2,6786 | 1,09048 | 1,00 | 5,00 |
| ICAW5post | 28 | 2,7143 | 1,04906 | 1,00 | 4,00 |
| ICAW6post | 28 | 2,8571 | 1,00791 | 2,00 | 5,00 |
| ICAW7post | 28 | 2,5714 | ,79015 | 1,00 | 4,00 |
| ICAW8post | 28 | 3,4643 | ,69293 | 2,00 | 5,00 |
| ICAW9post | 28 | 3,5357 | ,88117 | 2,00 | 5,00 |
| ICAW10post | 28 | 2,8214 | ,90487 | 1,00 | 4,00 |

| | | | | | |
|---|---|---|---|---|---|
| ICAW11post | 28 | 2,8929 | ,95604 | 1,00 | 5,00 |
| ICAW12post | 28 | 3,5714 | ,74180 | 2,00 | 5,00 |
| ICAW13post | 28 | 3,2143 | ,87590 | 2,00 | 5,00 |
| ICAW14post | 28 | 3,3571 | ,62148 | 2,00 | 5,00 |
| ICAW15post | 28 | 3,5714 | ,83571 | 1,00 | 5,00 |
| ICAW16post | 28 | 3,5000 | ,74536 | 2,00 | 5,00 |

**Test Statistics[a]**

| | ICAW1post - ICAW1 | ICAW3post - ICAW2 | ICAW3post - ICAW3 | ICAW4post - ICAW4 | ICAW5post - ICAW5 | ICAW6post - ICAW6 | ICAW7post - ICAW7 | ICAW8post - ICAW8 | ICAW9post - ICAW9 | ICAW10post - ICAW10 | ICAW11post - ICAW11 | ICAW12post - ICAW12 | ICAW13post - ICAW13 | ICAW14post - ICAW14 | ICAW15post - ICAW15 | ICAW16post - ICAW16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | -,812[b] | -,100[c] | -1,308[b] | -1,425[b] | -1,581[b] | -1,046[b] | -1,720[b] | -,884[b] | -1,350[b] | -1,386[b] | -1,308[b] | -1,667[b] | -,504[b] | -1,725[b] | -2,496[b] | -1,933[b] |
| Asymp. Sig. (2-tailed) | ,417 | ,920 | ,191 | ,154 | ,114 | ,296 | ,086 | ,377 | ,177 | ,166 | ,191 | ,096 | ,614 | ,084 | ,013 | ,053 |

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on positive ranks.

## Wilcoxon Signed Rank Test Results of ISS for the Online discussion Group

**Ranks**

| | | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ISS1post - ISS1 | Negative Ranks | 3[a] | 8,50 | 25,50 |
| | Positive Ranks | 21[b] | 13,07 | 274,50 |
| | Ties | 4[c] | | |
| | Total | 28 | | |
| ISS2post - ISS2 | Negative Ranks | 1[d] | 3,50 | 3,50 |
| | Positive Ranks | 22[e] | 12,39 | 272,50 |
| | Ties | 5[f] | | |
| | Total | 28 | | |
| ISS3post - ISS3 | Negative Ranks | 5[g] | 14,90 | 74,50 |
| | Positive Ranks | 16[h] | 9,78 | 156,50 |
| | Ties | 7[i] | | |
| | Total | 28 | | |
| ISS4post - ISS4 | Negative Ranks | 3[j] | 6,00 | 18,00 |
| | Positive Ranks | 18[k] | 11,83 | 213,00 |
| | Ties | 7[l] | | |
| | Total | 28 | | |
| ISS5post - ISS5 | Negative Ranks | 2[m] | 9,00 | 18,00 |
| | Positive Ranks | 19[n] | 11,21 | 213,00 |
| | Ties | 7[o] | | |
| | Total | 28 | | |
| ISS6post - ISS6 | Negative Ranks | 3[p] | 7,00 | 21,00 |
| | Positive Ranks | 16[q] | 10,56 | 169,00 |
| | Ties | 9[r] | | |
| | Total | 28 | | |
| ISS7post - ISS7 | Negative Ranks | 1[s] | 5,50 | 5,50 |
| | Positive Ranks | 25[t] | 13,82 | 345,50 |
| | Ties | 2[u] | | |
| | Total | 28 | | |
| ISS8post - ISS8 | Negative Ranks | 3[v] | 6,50 | 19,50 |
| | Positive Ranks | 21[w] | 13,36 | 280,50 |
| | Ties | 4[x] | | |
| | Total | 28 | | |
| ISS9post - ISS9 | Negative Ranks | 2[y] | 12,00 | 24,00 |
| | Positive Ranks | 18[z] | 10,33 | 186,00 |
| | Ties | 8[aa] | | |
| | Total | 28 | | |

| | | | | |
|---|---|---|---|---|
| ISS10post - ISS10 | Negative Ranks | 3[ab] | 10,33 | 31,00 |
| | Positive Ranks | 17[ac] | 10,53 | 179,00 |
| | Ties | 8[ad] | | |
| | Total | 28 | | |
| ISS11post - ISS11 | Negative Ranks | 3[ae] | 4,00 | 12,00 |
| | Positive Ranks | 11[af] | 8,45 | 93,00 |
| | Ties | 14[ag] | | |
| | Total | 28 | | |
| ISS12post - ISS12 | Negative Ranks | 3[ah] | 9,17 | 27,50 |
| | Positive Ranks | 19[ai] | 11,87 | 225,50 |
| | Ties | 6[aj] | | |
| | Total | 28 | | |
| ISS13post - ISS13 | Negative Ranks | 1[ak] | 5,50 | 5,50 |
| | Positive Ranks | 21[al] | 11,79 | 247,50 |
| | Ties | 6[am] | | |
| | Total | 28 | | |
| ISS14post - ISS14 | Negative Ranks | 4[an] | 6,00 | 24,00 |
| | Positive Ranks | 14[ao] | 10,50 | 147,00 |
| | Ties | 10[ap] | | |
| | Total | 28 | | |
| ISS15post - ISS15 | Negative Ranks | 6[aq] | 10,00 | 60,00 |
| | Positive Ranks | 14[ar] | 10,71 | 150,00 |
| | Ties | 8[as] | | |
| | Total | 28 | | |
| ISS16post - ISS16 | Negative Ranks | 1[at] | 6,50 | 6,50 |
| | Positive Ranks | 22[au] | 12,25 | 269,50 |
| | Ties | 5[av] | | |
| | Total | 28 | | |
| ISS17post - ISS17 | Negative Ranks | 3[aw] | 4,50 | 13,50 |
| | Positive Ranks | 19[ax] | 12,61 | 239,50 |
| | Ties | 6[ay] | | |
| | Total | 28 | | |
| ISS18post - ISS18 | Negative Ranks | 0[az] | ,00 | ,00 |
| | Positive Ranks | 22[ba] | 11,50 | 253,00 |
| | Ties | 6[bb] | | |
| | Total | 28 | | |
| ISS19post - ISS19 | Negative Ranks | 3[bc] | 9,17 | 27,50 |
| | Positive Ranks | 13[bd] | 8,35 | 108,50 |
| | Ties | 12[be] | | |
| | Total | 28 | | |
| ISS20post - ISS20 | Negative Ranks | 4[bf] | 7,00 | 28,00 |
| | Positive Ranks | 17[bg] | 11,94 | 203,00 |

| | | | | |
|---|---|---|---|---|
| | Ties | 7[bh] | | |
| | Total | 28 | | |
| ISS21post - ISS21 | Negative Ranks | 1[bi] | 14,50 | 14,50 |
| | Positive Ranks | 15[bj] | 8,10 | 121,50 |
| | Ties | 12[bk] | | |
| | Total | 28 | | |
| ISS22post - ISS22 | Negative Ranks | 3[bl] | 7,00 | 21,00 |
| | Positive Ranks | 13[bm] | 8,85 | 115,00 |
| | Ties | 12[bn] | | |
| | Total | 28 | | |
| ISS23post - ISS23 | Negative Ranks | 3[bo] | 6,50 | 19,50 |
| | Positive Ranks | 12[bp] | 8,38 | 100,50 |
| | Ties | 13[bq] | | |
| | Total | 28 | | |
| ISS24post - ISS24 | Negative Ranks | 2[br] | 11,50 | 23,00 |
| | Positive Ranks | 18[bs] | 10,39 | 187,00 |
| | Ties | 8[bt] | | |
| | Total | 28 | | |

a. ISS1post < ISS1

b. ISS1post > ISS1

c. ISS1post = ISS1

d. ISS2post < ISS2

e. ISS2post > ISS2

f. ISS2post = ISS2

g. ISS3post < ISS3

h. ISS3post > ISS3

i. ISS3post = ISS3

j. ISS4post < ISS4

k. ISS4post > ISS4

l. ISS4post = ISS4

m. ISS5post < ISS5

n. ISS5post > ISS5

o. ISS5post = ISS5

p. ISS6post < ISS6

q. ISS6post > ISS6

r. ISS6post = ISS6

s. ISS7post < ISS7

t. ISS7post > ISS7

u. ISS7post = ISS7

v. ISS8post < ISS8

w. ISS8post > ISS8

x. ISS8post = ISS8

y. ISS9post < ISS9

z. ISS9post > ISS9

aa. ISS9post = ISS9

ab. ISS10post < ISS10

ac. ISS10post > ISS10

ad. ISS10post = ISS10

ae. ISS11post < ISS11

af. ISS11post > ISS11

ag. ISS11post = ISS11

ah. ISS12post < ISS12

ai. ISS12post > ISS12

aj. ISS12post = ISS12

ak. ISS13post < ISS13

al. ISS13post > ISS13

am. ISS13post = ISS13

an. ISS14post < ISS14

ao. ISS14post > ISS14

ap. ISS14post = ISS14

aq. ISS15post < ISS15

ar. ISS15post > ISS15

as. ISS15post = ISS15

at. ISS16post < ISS16

au. ISS16post > ISS16

av. ISS16post = ISS16

aw. ISS17post < ISS17

ax. ISS17post > ISS17

ay. ISS17post = ISS17

az. ISS18post < ISS18

ba. ISS18post > ISS18

bb. ISS18post = ISS18

bc. ISS19post < ISS19

bd. ISS19post > ISS19

be. ISS19post = ISS19

bf. ISS20post < ISS20

bg. ISS20post > ISS20

bh. ISS20post = ISS20

bi. ISS21post < ISS21

bj. ISS21post > ISS21

bk. ISS21post = ISS21

bl. ISS22post < ISS22

bm. ISS22post > ISS22

bn. ISS22post = ISS22

bo. ISS23post < ISS23

bp. ISS23post > ISS23

bq. ISS23post = ISS23

br. ISS24post < ISS24

bs. ISS24post > ISS24

bt. ISS24post = ISS24

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ISS1 | 28 | 3,2143 | ,56811 | 2,00 | 4,00 |
| ISS2 | 28 | 2,3929 | ,56695 | 2,00 | 4,00 |
| ISS3 | 28 | 2,6786 | ,81892 | 1,00 | 4,00 |
| ISS4 | 28 | 2,2857 | ,80999 | 1,00 | 4,00 |
| ISS5 | 28 | 2,0714 | ,76636 | 1,00 | 3,00 |
| ISS6 | 28 | 2,6071 | ,68526 | 1,00 | 4,00 |
| ISS7 | 28 | 2,7143 | ,80999 | 2,00 | 4,00 |
| ISS8 | 28 | 3,1429 | ,65060 | 2,00 | 4,00 |
| ISS9 | 28 | 2,6071 | ,78595 | 1,00 | 4,00 |
| ISS10 | 28 | 2,3929 | ,68526 | 1,00 | 4,00 |
| ISS11 | 28 | 2,7857 | ,62994 | 2,00 | 4,00 |
| ISS12 | 28 | 2,2857 | ,76290 | 1,00 | 4,00 |
| ISS13 | 28 | 3,0357 | ,83808 | 1,00 | 4,00 |
| ISS14 | 28 | 3,0357 | ,63725 | 2,00 | 4,00 |
| ISS15 | 28 | 3,1786 | ,86297 | 1,00 | 4,00 |
| ISS16 | 28 | 3,1071 | ,49735 | 2,00 | 4,00 |
| ISS17 | 28 | 2,5714 | ,79015 | 2,00 | 4,00 |
| ISS18 | 28 | 2,7857 | ,83254 | 2,00 | 4,00 |
| ISS19 | 28 | 2,7143 | ,71270 | 1,00 | 4,00 |
| ISS20 | 28 | 2,5714 | ,92009 | 1,00 | 4,00 |
| ISS21 | 28 | 3,0714 | ,37796 | 2,00 | 4,00 |
| ISS22 | 28 | 2,3929 | ,73733 | 1,00 | 4,00 |
| ISS23 | 28 | 2,6071 | ,56695 | 2,00 | 4,00 |
| ISS24 | 28 | 2,8929 | ,56695 | 2,00 | 4,00 |
| ISS1post | 28 | 4,1429 | ,65060 | 3,00 | 5,00 |
| ISS2post | 28 | 4,1786 | 1,09048 | 2,00 | 5,00 |
| ISS3post | 28 | 3,1071 | ,91649 | 1,00 | 5,00 |
| ISS4post | 28 | 3,2857 | ,93718 | 1,00 | 5,00 |
| ISS5post | 28 | 2,8214 | ,66964 | 2,00 | 4,00 |
| ISS6post | 28 | 3,3214 | ,81892 | 2,00 | 5,00 |
| ISS7post | 28 | 4,4643 | ,69293 | 3,00 | 5,00 |
| ISS8post | 28 | 4,2857 | ,76290 | 3,00 | 5,00 |

| | | | | | |
|---|---|---|---|---|---|
| ISS9post | 28 | 3,6429 | ,95119 | 2,00 | 5,00 |
| ISS10post | 28 | 3,1429 | ,89087 | 1,00 | 5,00 |
| ISS11post | 28 | 3,3571 | ,78004 | 2,00 | 5,00 |
| ISS12post | 28 | 3,2857 | 1,04906 | 1,00 | 5,00 |
| ISS13post | 28 | 4,3214 | ,72283 | 3,00 | 5,00 |
| ISS14post | 28 | 3,7857 | ,87590 | 2,00 | 5,00 |
| ISS15post | 28 | 3,6786 | ,94491 | 2,00 | 5,00 |
| ISS16post | 28 | 4,3214 | ,77237 | 3,00 | 5,00 |
| ISS17post | 28 | 3,8214 | ,94491 | 2,00 | 5,00 |
| ISS18post | 28 | 4,4643 | ,83808 | 2,00 | 5,00 |
| ISS19post | 28 | 3,3214 | ,98333 | 1,00 | 5,00 |
| ISS20post | 28 | 3,3571 | ,86984 | 2,00 | 5,00 |
| ISS21post | 28 | 3,6429 | ,73102 | 2,00 | 5,00 |
| ISS22post | 28 | 2,8929 | ,73733 | 1,00 | 4,00 |
| ISS23post | 28 | 3,0357 | ,74447 | 2,00 | 5,00 |
| ISS24post | 28 | 3,6786 | ,86297 | 2,00 | 5,00 |

| | ISS1post-ISS1 | ISS2post-ISS2 | ISS3post-ISS3 | ISS4post-ISS4 | ISS5post-ISS5 | ISS6post-ISS6 | ISS7post-ISS7 | ISS8post-ISS8 | ISS9post-ISS9 | ISS10post-ISS10 | ISS11post-ISS11 | ISS12post-ISS12 | ISS13post-ISS13 | ISS14post-ISS14 | ISS15post-ISS15 | ISS16post-ISS16 | ISS17post-ISS17 | ISS18post-ISS18 | ISS19post-ISS19 | ISS20post-ISS20 | ISS21post-ISS21 | ISS22post-ISS22 | ISS23post-ISS23 | ISS24post-ISS24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asymp. Sig. (2-tailed) | -3,704[b] | -4,174[b] | -1,471[b] | -3,463[b] | -3,622[b] | -3,101[b] | -4,378[b] | -3,818[b] | -3,067[b] | -2,834[b] | -2,601[b] | -3,281[b] | -4,005[b] | -2,736[b] | -1,718[b] | -4,097[b] | -3,724[b] | -4,187[b] | -2,137[b] | -3,143[b] | -2,914[b] | -2,594[b] | -2,448[b] | -3,165[b] |
| | ,000 | ,000 | ,141 | ,001 | ,000 | ,002 | ,000 | ,000 | ,002 | ,005 | ,009 | ,001 | ,000 | ,006 | ,086 | ,000 | ,000 | ,000 | ,033 | ,002 | ,004 | ,009 | ,014 | ,002 |

**Wilcoxon Signed Rank Test Results of ISS for the In-class Discussion Group**

**Ranks**

| | | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ISS1post - ISS1 | Negative Ranks | 3[a] | 8,50 | 25,50 |
| | Positive Ranks | 21[b] | 13,07 | 274,50 |
| | Ties | 4[c] | | |
| | Total | 28 | | |
| ISS2post - ISS2 | Negative Ranks | 1[d] | 3,50 | 3,50 |
| | Positive Ranks | 22[e] | 12,39 | 272,50 |
| | Ties | 5[f] | | |
| | Total | 28 | | |
| ISS3post - ISS3 | Negative Ranks | 5[g] | 14,90 | 74,50 |
| | Positive Ranks | 16[h] | 9,78 | 156,50 |
| | Ties | 7[i] | | |
| | Total | 28 | | |
| ISS4post - ISS4 | Negative Ranks | 3[j] | 6,00 | 18,00 |
| | Positive Ranks | 18[k] | 11,83 | 213,00 |
| | Ties | 7[l] | | |
| | Total | 28 | | |

| | | | | |
|---|---|---|---|---|
| ISS5post - ISS5 | Negative Ranks | 2[m] | 9,00 | 18,00 |
| | Positive Ranks | 19[n] | 11,21 | 213,00 |
| | Ties | 7[o] | | |
| | Total | 28 | | |
| ISS6post - ISS6 | Negative Ranks | 3[p] | 7,00 | 21,00 |
| | Positive Ranks | 16[q] | 10,56 | 169,00 |
| | Ties | 9[r] | | |
| | Total | 28 | | |
| ISS7post - ISS7 | Negative Ranks | 1[s] | 5,50 | 5,50 |
| | Positive Ranks | 25[t] | 13,82 | 345,50 |
| | Ties | 2[u] | | |
| | Total | 28 | | |
| ISS8post - ISS8 | Negative Ranks | 3[v] | 6,50 | 19,50 |
| | Positive Ranks | 21[w] | 13,36 | 280,50 |
| | Ties | 4[x] | | |
| | Total | 28 | | |
| ISS9post - ISS9 | Negative Ranks | 2[y] | 12,00 | 24,00 |
| | Positive Ranks | 18[z] | 10,33 | 186,00 |
| | Ties | 8[aa] | | |
| | Total | 28 | | |
| ISS10post - ISS10 | Negative Ranks | 3[ab] | 10,33 | 31,00 |
| | Positive Ranks | 17[ac] | 10,53 | 179,00 |
| | Ties | 8[ad] | | |
| | Total | 28 | | |
| ISS11post - ISS11 | Negative Ranks | 3[ae] | 4,00 | 12,00 |
| | Positive Ranks | 11[af] | 8,45 | 93,00 |
| | Ties | 14[ag] | | |
| | Total | 28 | | |
| ISS12post - ISS12 | Negative Ranks | 3[ah] | 9,17 | 27,50 |
| | Positive Ranks | 19[ai] | 11,87 | 225,50 |
| | Ties | 6[aj] | | |
| | Total | 28 | | |
| ISS13post - ISS13 | Negative Ranks | 1[ak] | 5,50 | 5,50 |
| | Positive Ranks | 21[al] | 11,79 | 247,50 |
| | Ties | 6[am] | | |
| | Total | 28 | | |
| ISS14post - ISS14 | Negative Ranks | 4[an] | 6,00 | 24,00 |
| | Positive Ranks | 14[ao] | 10,50 | 147,00 |
| | Ties | 10[ap] | | |
| | Total | 28 | | |
| ISS15post - ISS15 | Negative Ranks | 6[aq] | 10,00 | 60,00 |
| | Positive Ranks | 14[ar] | 10,71 | 150,00 |

| | | | | |
|---|---|---|---|---|
| | Ties | 8[as] | | |
| | Total | 28 | | |
| ISS16post - ISS16 | Negative Ranks | 1[at] | 6,50 | 6,50 |
| | Positive Ranks | 22[au] | 12,25 | 269,50 |
| | Ties | 5[av] | | |
| | Total | 28 | | |
| ISS17post - ISS17 | Negative Ranks | 3[aw] | 4,50 | 13,50 |
| | Positive Ranks | 19[ax] | 12,61 | 239,50 |
| | Ties | 6[ay] | | |
| | Total | 28 | | |
| ISS18post - ISS18 | Negative Ranks | 0[az] | ,00 | ,00 |
| | Positive Ranks | 22[ba] | 11,50 | 253,00 |
| | Ties | 6[bb] | | |
| | Total | 28 | | |
| ISS19post - ISS19 | Negative Ranks | 3[bc] | 9,17 | 27,50 |
| | Positive Ranks | 13[bd] | 8,35 | 108,50 |
| | Ties | 12[be] | | |
| | Total | 28 | | |
| ISS20post - ISS20 | Negative Ranks | 4[bf] | 7,00 | 28,00 |
| | Positive Ranks | 17[bg] | 11,94 | 203,00 |
| | Ties | 7[bh] | | |
| | Total | 28 | | |
| ISS21post - ISS21 | Negative Ranks | 1[bi] | 14,50 | 14,50 |
| | Positive Ranks | 15[bj] | 8,10 | 121,50 |
| | Ties | 12[bk] | | |
| | Total | 28 | | |
| ISS22post - ISS22 | Negative Ranks | 3[bl] | 7,00 | 21,00 |
| | Positive Ranks | 13[bm] | 8,85 | 115,00 |
| | Ties | 12[bn] | | |
| | Total | 28 | | |
| ISS23post - ISS23 | Negative Ranks | 3[bo] | 6,50 | 19,50 |
| | Positive Ranks | 12[bp] | 8,38 | 100,50 |
| | Ties | 13[bq] | | |
| | Total | 28 | | |
| ISS24post - ISS24 | Negative Ranks | 2[br] | 11,50 | 23,00 |
| | Positive Ranks | 18[bs] | 10,39 | 187,00 |
| | Ties | 8[bt] | | |
| | Total | 28 | | |

a. ISS1post < ISS1

b. ISS1post > ISS1

c. ISS1post = ISS1

d. ISS2post < ISS2

e. ISS2post > ISS2
f. ISS2post = ISS2
g. ISS3post < ISS3
h. ISS3post > ISS3
i. ISS3post = ISS3
j. ISS4post < ISS4
k. ISS4post > ISS4
l. ISS4post = ISS4
m. ISS5post < ISS5
n. ISS5post > ISS5
o. ISS5post = ISS5
p. ISS6post < ISS6
q. ISS6post > ISS6
r. ISS6post = ISS6
s. ISS7post < ISS7
t. ISS7post > ISS7
u. ISS7post = ISS7
v. ISS8post < ISS8
w. ISS8post > ISS8
x. ISS8post = ISS8
y. ISS9post < ISS9
z. ISS9post > ISS9
aa. ISS9post = ISS9
ab. ISS10post < ISS10
ac. ISS10post > ISS10
ad. ISS10post = ISS10
ae. ISS11post < ISS11
af. ISS11post > ISS11
ag. ISS11post = ISS11
ah. ISS12post < ISS12
ai. ISS12post > ISS12
aj. ISS12post = ISS12
ak. ISS13post < ISS13
al. ISS13post > ISS13
am. ISS13post = ISS13
an. ISS14post < ISS14
ao. ISS14post > ISS14
ap. ISS14post = ISS14
aq. ISS15post < ISS15
ar. ISS15post > ISS15
as. ISS15post = ISS15
at. ISS16post < ISS16

au. ISS16post > ISS16

av. ISS16post = ISS16

aw. ISS17post < ISS17

ax. ISS17post > ISS17

ay. ISS17post = ISS17

az. ISS18post < ISS18

ba. ISS18post > ISS18

bb. ISS18post = ISS18

bc. ISS19post < ISS19

bd. ISS19post > ISS19

be. ISS19post = ISS19

bf. ISS20post < ISS20

bg. ISS20post > ISS20

bh. ISS20post = ISS20

bi. ISS21post < ISS21

bj. ISS21post > ISS21

bk. ISS21post = ISS21

bl. ISS22post < ISS22

bm. ISS22post > ISS22

bn. ISS22post = ISS22

bo. ISS23post < ISS23

bp. ISS23post > ISS23

bq. ISS23post = ISS23

br. ISS24post < ISS24

bs. ISS24post > ISS24

bt. ISS24post = ISS24

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ISS1 | 28 | 3,2143 | ,56811 | 2,00 | 4,00 |
| ISS2 | 28 | 2,3929 | ,56695 | 2,00 | 4,00 |
| ISS3 | 28 | 2,6786 | ,81892 | 1,00 | 4,00 |
| ISS4 | 28 | 2,2857 | ,80999 | 1,00 | 4,00 |
| ISS5 | 28 | 2,0714 | ,76636 | 1,00 | 3,00 |
| ISS6 | 28 | 2,6071 | ,68526 | 1,00 | 4,00 |
| ISS7 | 28 | 2,7143 | ,80999 | 2,00 | 4,00 |
| ISS8 | 28 | 3,1429 | ,65060 | 2,00 | 4,00 |
| ISS9 | 28 | 2,6071 | ,78595 | 1,00 | 4,00 |
| ISS10 | 28 | 2,3929 | ,68526 | 1,00 | 4,00 |
| ISS11 | 28 | 2,7857 | ,62994 | 2,00 | 4,00 |

| | | | | | |
|---|---|---|---|---|---|
| ISS12 | 28 | 2,2857 | ,76290 | 1,00 | 4,00 |
| ISS13 | 28 | 3,0357 | ,83808 | 1,00 | 4,00 |
| ISS14 | 28 | 3,0357 | ,63725 | 2,00 | 4,00 |
| ISS15 | 28 | 3,1786 | ,86297 | 1,00 | 4,00 |
| ISS16 | 28 | 3,1071 | ,49735 | 2,00 | 4,00 |
| ISS17 | 28 | 2,5714 | ,79015 | 2,00 | 4,00 |
| ISS18 | 28 | 2,7857 | ,83254 | 2,00 | 4,00 |
| ISS19 | 28 | 2,7143 | ,71270 | 1,00 | 4,00 |
| ISS20 | 28 | 2,5714 | ,92009 | 1,00 | 4,00 |
| ISS21 | 28 | 3,0714 | ,37796 | 2,00 | 4,00 |
| ISS22 | 28 | 2,3929 | ,73733 | 1,00 | 4,00 |
| ISS23 | 28 | 2,6071 | ,56695 | 2,00 | 4,00 |
| ISS24 | 28 | 2,8929 | ,56695 | 2,00 | 4,00 |
| ISS1post | 28 | 4,1429 | ,65060 | 3,00 | 5,00 |
| ISS2post | 28 | 4,1786 | 1,09048 | 2,00 | 5,00 |
| ISS3post | 28 | 3,1071 | ,91649 | 1,00 | 5,00 |
| ISS4post | 28 | 3,2857 | ,93718 | 1,00 | 5,00 |
| ISS5post | 28 | 2,8214 | ,66964 | 2,00 | 4,00 |
| ISS6post | 28 | 3,3214 | ,81892 | 2,00 | 5,00 |
| ISS7post | 28 | 4,4643 | ,69293 | 3,00 | 5,00 |
| ISS8post | 28 | 4,2857 | ,76290 | 3,00 | 5,00 |
| ISS9post | 28 | 3,6429 | ,95119 | 2,00 | 5,00 |
| ISS10post | 28 | 3,1429 | ,89087 | 1,00 | 5,00 |
| ISS11post | 28 | 3,3571 | ,78004 | 2,00 | 5,00 |
| ISS12post | 28 | 3,2857 | 1,04906 | 1,00 | 5,00 |
| ISS13post | 28 | 4,3214 | ,72283 | 3,00 | 5,00 |
| ISS14post | 28 | 3,7857 | ,87590 | 2,00 | 5,00 |
| ISS15post | 28 | 3,6786 | ,94491 | 2,00 | 5,00 |
| ISS16post | 28 | 4,3214 | ,77237 | 3,00 | 5,00 |
| ISS17post | 28 | 3,8214 | ,94491 | 2,00 | 5,00 |
| ISS18post | 28 | 4,4643 | ,83808 | 2,00 | 5,00 |
| ISS19post | 28 | 3,3214 | ,98333 | 1,00 | 5,00 |
| ISS20post | 28 | 3,3571 | ,86984 | 2,00 | 5,00 |
| ISS21post | 28 | 3,6429 | ,73102 | 2,00 | 5,00 |
| ISS22post | 28 | 2,8929 | ,73733 | 1,00 | 4,00 |
| ISS23post | 28 | 3,0357 | ,74447 | 2,00 | 5,00 |
| ISS24post | 28 | 3,6786 | ,86297 | 2,00 | 5,00 |

| | ISS1post-ISS1 | ISS2post-ISS2 | ISS3post-ISS3 | ISS4post-ISS4 | ISS5post-ISS5 | ISS6post-ISS6 | ISS7post-ISS7 | ISS8post-ISS8 | ISS9post-ISS9 | ISS10post-ISS10 | ISS11post-ISS11 | ISS12post-ISS12 | ISS13post-ISS13 | ISS14post-ISS14 | ISS15post-ISS15 | ISS16post-ISS16 | ISS17post-ISS17 | ISS18post-ISS18 | ISS19post-ISS19 | ISS20post-ISS20 | ISS21post-ISS21 | ISS22post-ISS22 | ISS23post-ISS23 | ISS24post-ISS24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | -3,704[b] | -4,174[b] | -1,471[b] | -3,463[b] | -3,622[b] | -3,101[b] | -4,378[b] | -3,818[b] | -3,067[b] | -2,834[b] | -2,601[b] | -3,281[b] | -4,005[b] | -2,736[b] | -1,718[b] | -4,097[b] | -3,724[b] | -4,187[b] | -2,137[b] | -3,143[b] | -2,914[b] | -2,594[b] | -2,448[b] | -3,165[b] |
| Asymp. Sig. (2-tailed) | ,000 | ,000 | ,141 | ,001 | ,000 | ,002 | ,000 | ,000 | ,002 | ,005 | ,009 | ,001 | ,000 | ,006 | ,086 | ,000 | ,000 | ,000 | ,033 | ,002 | ,004 | ,009 | ,014 | ,002 |

**Pre-test Mann-Whitney U Results of ICAN Scale**

**Ranks**

| | GroupPre | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | Experimental | 28 | 30,29 | 848,00 |
| ICAN1 | Control | 28 | 26,71 | 748,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,21 | 790,00 |
| ICAN2 | Control | 28 | 28,79 | 806,00 |
| | Total | 56 | | |
| | Experimental | 28 | 27,61 | 773,00 |
| ICAN3 | Control | 28 | 29,39 | 823,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,50 | 798,00 |
| ICAN4 | Control | 28 | 28,50 | 798,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,86 | 808,00 |
| ICAN5 | Control | 28 | 28,14 | 788,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,71 | 804,00 |
| ICAN6 | Control | 28 | 28,29 | 792,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,79 | 806,00 |
| ICAN7 | Control | 28 | 28,21 | 790,00 |
| | Total | 56 | | |
| | Experimental | 28 | 30,38 | 850,50 |
| ICAN8 | Control | 28 | 26,63 | 745,50 |
| | Total | 56 | | |
| | Experimental | 28 | 30,21 | 846,00 |
| ICAN9 | Control | 28 | 26,79 | 750,00 |
| | Total | 56 | | |
| | Experimental | 28 | 29,20 | 817,50 |
| ICAN10 | Control | 28 | 27,80 | 778,50 |
| | Total | 56 | | |
| | Experimental | 28 | 30,93 | 866,00 |
| ICAN11 | Control | 28 | 26,07 | 730,00 |
| | Total | 56 | | |
| | Experimental | 28 | 31,68 | 887,00 |
| ICAN12 | Control | 28 | 25,32 | 709,00 |
| | Total | 56 | | |
| | Experimental | 28 | 30,93 | 866,00 |
| ICAN13 | Control | 28 | 26,07 | 730,00 |
| | Total | 56 | | |
| | Experimental | 28 | 30,73 | 860,50 |
| ICAN14 | Control | 28 | 26,27 | 735,50 |
| | Total | 56 | | |

| | | | | |
|---|---|---|---|---|
| | Experimental | 28 | 29,00 | 812,00 |
| ICAN15 | Control | 28 | 28,00 | 784,00 |
| | Total | 56 | | |
| | Experimental | 28 | 30,32 | 849,00 |
| ICAN16 | Control | 28 | 26,68 | 747,00 |
| | Total | 56 | | |

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ICAN1 | 56 | 2,8929 | ,56177 | 2,00 | 4,00 |
| ICAN2 | 56 | 3,3750 | ,70227 | 2,00 | 5,00 |
| ICAN3 | 56 | 3,5179 | ,87368 | 1,00 | 5,00 |
| ICAN4 | 56 | 4,2500 | ,69413 | 3,00 | 5,00 |
| ICAN5 | 56 | 4,2500 | ,81464 | 2,00 | 5,00 |
| ICAN6 | 56 | 4,1429 | ,92301 | 2,00 | 5,00 |
| ICAN7 | 56 | 3,6786 | ,76532 | 2,00 | 5,00 |
| ICAN8 | 56 | 3,8750 | ,63425 | 2,00 | 5,00 |
| ICAN9 | 56 | 4,3214 | ,91666 | 2,00 | 5,00 |
| ICAN10 | 56 | 4,3214 | ,87609 | 2,00 | 5,00 |
| ICAN11 | 56 | 3,9286 | ,80582 | 2,00 | 5,00 |
| ICAN12 | 56 | 3,3929 | ,86715 | 1,00 | 5,00 |
| ICAN13 | 56 | 3,8571 | ,84053 | 2,00 | 5,00 |
| ICAN14 | 56 | 3,4464 | ,78438 | 1,00 | 4,00 |
| ICAN15 | 56 | 4,2857 | ,96699 | 2,00 | 5,00 |
| ICAN16 | 56 | 3,7143 | ,84669 | 2,00 | 5,00 |
| GroupPre | 56 | 1,5000 | ,50452 | 1,00 | 2,00 |

**Test Statistics[a]**

| | ICAN1 | ICAN2 | ICAN3 | ICAN4 | ICAN5 | ICAN6 | ICAN7 | ICAN8 | ICAN9 | ICAN10 | ICAN11 | ICAN12 | ICAN13 | ICAN14 | ICAN15 | ICAN16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mann-Whitney U | 342,000 | 384,000 | 367,000 | 392,000 | 382,000 | 386,000 | 384,000 | 339,500 | 344,000 | 372,500 | 324,000 | 303,000 | 324,000 | 329,500 | 378,000 | 341,000 |
| Wilcoxon W | 748,000 | 790,000 | 773,000 | 798,000 | 788,000 | 792,000 | 790,000 | 745,500 | 750,000 | 778,500 | 730,000 | 709,000 | 730,000 | 735,500 | 784,000 | 747,000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z | -,996 | -,144 | -,450 | ,000 | -,178 | -,105 | -,142 | -1,012 | -,889 | -,353 | -1,245 | -1,575 | -1,205 | -1,169 | -,255 | -,916 |
| Asymp. Sig. (2-tailed) | ,319 | ,885 | ,653 | 1,000 | ,859 | ,916 | ,887 | ,312 | ,374 | ,724 | ,213 | ,115 | ,228 | ,242 | ,799 | ,360 |

a. Grouping Variable: GroupPre

## Pre-test Mann-Whitney U Results of ICAW Scale

**Ranks**

| | GroupPre | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ICAW1 | Experimental | 28 | 27,54 | 771,00 |
| | Control | 28 | 29,46 | 825,00 |
| | Total | 56 | | |
| ICAW2 | Experimental | 28 | 27,07 | 758,00 |
| | Control | 28 | 29,93 | 838,00 |
| | Total | 56 | | |
| ICAW3 | Experimental | 28 | 28,00 | 784,00 |
| | Control | 28 | 29,00 | 812,00 |
| | Total | 56 | | |
| ICAW4 | Experimental | 28 | 27,07 | 758,00 |
| | Control | 28 | 29,93 | 838,00 |
| | Total | 56 | | |
| ICAW5 | Experimental | 28 | 28,46 | 797,00 |
| | Control | 28 | 28,54 | 799,00 |
| | Total | 56 | | |
| ICAW6 | Experimental | 28 | 26,30 | 736,50 |
| | Control | 28 | 30,70 | 859,50 |
| | Total | 56 | | |
| ICAW7 | Experimental | 28 | 30,14 | 844,00 |
| | Control | 28 | 26,86 | 752,00 |
| | Total | 56 | | |
| ICAW8 | Experimental | 28 | 27,89 | 781,00 |
| | Control | 28 | 29,11 | 815,00 |
| | Total | 56 | | |
| ICAW9 | Experimental | 28 | 26,04 | 729,00 |

| | | | | |
|---|---|---|---|---|
| | Control | 28 | 30,96 | 867,00 |
| | Total | 56 | | |
| | Experimental | 28 | 29,52 | 826,50 |
| ICAW10 | Control | 28 | 27,48 | 769,50 |
| | Total | 56 | | |
| | Experimental | 28 | 27,21 | 762,00 |
| ICAW11 | Control | 28 | 29,79 | 834,00 |
| | Total | 56 | | |
| | Experimental | 28 | 25,04 | 701,00 |
| ICAW12 | Control | 28 | 31,96 | 895,00 |
| | Total | 56 | | |
| | Experimental | 28 | 25,86 | 724,00 |
| ICAW13 | Control | 28 | 31,14 | 872,00 |
| | Total | 56 | | |
| | Experimental | 28 | 26,88 | 752,50 |
| ICAW14 | Control | 28 | 30,13 | 843,50 |
| | Total | 56 | | |
| | Experimental | 28 | 29,27 | 819,50 |
| ICAW15 | Control | 28 | 27,73 | 776,50 |
| | Total | 56 | | |
| | Experimental | 28 | 27,02 | 756,50 |
| ICAW16 | Control | 28 | 29,98 | 839,50 |
| | Total | 56 | | |

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ICAW1 | 56 | 3,3571 | ,55362 | 2,00 | 4,00 |
| ICAW2 | 56 | 3,3571 | ,67227 | 2,00 | 4,00 |
| ICAW3 | 56 | 3,1250 | ,60490 | 2,00 | 4,00 |
| ICAW4 | 56 | 2,3571 | ,84053 | 1,00 | 4,00 |
| ICAW5 | 56 | 2,3571 | ,74903 | 1,00 | 4,00 |
| ICAW6 | 56 | 2,5357 | ,76192 | 2,00 | 4,00 |
| ICAW7 | 56 | 2,2500 | ,79201 | 1,00 | 4,00 |
| ICAW8 | 56 | 3,3036 | ,63014 | 2,00 | 4,00 |
| ICAW9 | 56 | 3,2143 | ,62419 | 2,00 | 4,00 |
| ICAW10 | 56 | 2,6429 | ,69879 | 1,00 | 4,00 |
| ICAW11 | 56 | 2,5714 | ,78293 | 1,00 | 4,00 |
| ICAW12 | 56 | 3,2500 | ,57997 | 2,00 | 4,00 |
| ICAW13 | 56 | 2,9821 | ,70042 | 2,00 | 4,00 |
| ICAW14 | 56 | 3,0179 | ,64642 | 1,00 | 4,00 |
| ICAW15 | 56 | 3,2679 | ,77439 | 1,00 | 4,00 |

| | | | | | |
|---|---|---|---|---|---|
| ICAW16 | 56 | 3,1786 | ,63553 | 2,00 | 4,00 |
| GroupPre | 56 | 1,5000 | ,50452 | 1,00 | 2,00 |

**Test Statistics[a]**

| | ICAW1 | ICAW2 | ICAW3 | ICAW4 | ICAW5 | ICAW6 | ICAW7 | ICAW8 | ICAW9 | ICAW10 | ICAW11 | ICAW12 | ICAW13 | ICAW14 | ICAW15 | ICAW16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mann-Whitney U | 365,000 | 352,000 | 378,000 | 352,000 | 391,000 | 330,500 | 346,000 | 375,000 | 323,000 | 363,500 | 356,000 | 295,000 | 318,000 | 346,500 | 370,500 | 350,500 |
| Wilcoxon W | 771,000 | 758,000 | 784,000 | 758,000 | 797,000 | 736,500 | 752,000 | 781,000 | 729,000 | 769,500 | 762,000 | 701,000 | 724,000 | 752,500 | 776,500 | 756,500 |
| Z | -,510 | -,724 | -,267 | -,698 | -,018 | -1,170 | -,851 | -,311 | -1,281 | -,515 | -,644 | -1,844 | -1,328 | -,876 | -,392 | -,768 |
| Asymp. Sig. (2-tailed) | ,610 | ,469 | ,790 | ,485 | ,986 | ,242 | ,395 | ,755 | ,200 | ,606 | ,520 | ,065 | ,184 | ,381 | ,695 | ,442 |

a. Grouping Variable: GroupPre

## Pre-test Mann-Whitney U Results of IS Scale

**Ranks**

| | GroupPre | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ISS1 | Experimental | 28 | 28,96 | 811,00 |
| | Control | 28 | 28,04 | 785,00 |
| | Total | 56 | | |
| ISS2 | Experimental | 28 | 25,02 | 700,50 |
| | Control | 28 | 31,98 | 895,50 |
| | Total | 56 | | |
| ISS3 | Experimental | 28 | 28,91 | 809,50 |

| | | | | |
|---|---|---|---|---|
| | Control | 28 | 28,09 | 786,50 |
| | Total | 56 | | |
| | Experimental | 28 | 28,14 | 788,00 |
| ISS4 | Control | 28 | 28,86 | 808,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,04 | 785,00 |
| ISS5 | Control | 28 | 28,96 | 811,00 |
| | Total | 56 | | |
| | Experimental | 28 | 29,25 | 819,00 |
| ISS6 | Control | 28 | 27,75 | 777,00 |
| | Total | 56 | | |
| | Experimental | 28 | 25,54 | 715,00 |
| ISS7 | Control | 28 | 31,46 | 881,00 |
| | Total | 56 | | |
| | Experimental | 28 | 25,29 | 708,00 |
| ISS8 | Control | 28 | 31,71 | 888,00 |
| | Total | 56 | | |
| | Experimental | 28 | 26,02 | 728,50 |
| ISS9 | Control | 28 | 30,98 | 867,50 |
| | Total | 56 | | |
| | Experimental | 28 | 28,34 | 793,50 |
| ISS10 | Control | 28 | 28,66 | 802,50 |
| | Total | 56 | | |
| | Experimental | 28 | 30,34 | 849,50 |
| ISS11 | Control | 28 | 26,66 | 746,50 |
| | Total | 56 | | |
| | Experimental | 28 | 27,48 | 769,50 |
| ISS12 | Control | 28 | 29,52 | 826,50 |
| | Total | 56 | | |
| | Experimental | 28 | 25,80 | 722,50 |
| ISS13 | Control | 28 | 31,20 | 873,50 |
| | Total | 56 | | |
| | Experimental | 28 | 27,68 | 775,00 |
| ISS14 | Control | 28 | 29,32 | 821,00 |
| | Total | 56 | | |
| | Experimental | 28 | 29,82 | 835,00 |
| ISS15 | Control | 28 | 27,18 | 761,00 |
| | Total | 56 | | |
| | Experimental | 28 | 25,77 | 721,50 |
| ISS16 | Control | 28 | 31,23 | 874,50 |
| | Total | 56 | | |
| ISS17 | Experimental | 28 | 27,29 | 764,00 |

| | | | | |
|---|---|---|---|---|
| | Control | 28 | 29,71 | 832,00 |
| | Total | 56 | | |
| | Experimental | 28 | 25,66 | 718,50 |
| ISS18 | Control | 28 | 31,34 | 877,50 |
| | Total | 56 | | |
| | Experimental | 28 | 30,64 | 858,00 |
| ISS19 | Control | 28 | 26,36 | 738,00 |
| | Total | 56 | | |
| | Experimental | 28 | 25,86 | 724,00 |
| ISS20 | Control | 28 | 31,14 | 872,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,91 | 809,50 |
| ISS21 | Control | 28 | 28,09 | 786,50 |
| | Total | 56 | | |
| | Experimental | 28 | 24,21 | 678,00 |
| ISS22 | Control | 28 | 32,79 | 918,00 |
| | Total | 56 | | |
| | Experimental | 28 | 28,23 | 790,50 |
| ISS23 | Control | 28 | 28,77 | 805,50 |
| | Total | 56 | | |
| | Experimental | 28 | 27,27 | 763,50 |
| ISS24 | Control | 28 | 29,73 | 832,50 |
| | Total | 56 | | |

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ISS1 | 56 | 3,1964 | ,55333 | 2,00 | 4,00 |
| ISS2 | 56 | 2,5893 | ,73303 | 2,00 | 4,00 |
| ISS3 | 56 | 2,6607 | ,74533 | 1,00 | 4,00 |
| ISS4 | 56 | 2,3214 | ,89660 | 1,00 | 4,00 |
| ISS5 | 56 | 2,1071 | ,75507 | 1,00 | 4,00 |
| ISS6 | 56 | 2,5714 | ,78293 | 1,00 | 4,00 |
| ISS7 | 56 | 2,8750 | ,83258 | 2,00 | 4,00 |
| ISS8 | 56 | 3,2857 | ,62419 | 2,00 | 4,00 |
| ISS9 | 56 | 2,7500 | ,85812 | 1,00 | 4,00 |
| ISS10 | 56 | 2,3929 | ,70527 | 1,00 | 4,00 |
| ISS11 | 56 | 2,6964 | ,65836 | 1,00 | 4,00 |
| ISS12 | 56 | 2,3393 | ,72052 | 1,00 | 4,00 |
| ISS13 | 56 | 3,1786 | ,78872 | 1,00 | 4,00 |

| | | | | | |
|---|---|---|---|---|---|
| ISS14 | 56 | 3,0714 | ,65663 | 2,00 | 4,00 |
| ISS15 | 56 | 3,1250 | ,83258 | 1,00 | 4,00 |
| ISS16 | 56 | 3,2143 | ,52964 | 2,00 | 4,00 |
| ISS17 | 56 | 2,6429 | ,81861 | 2,00 | 4,00 |
| ISS18 | 56 | 2,9464 | ,86170 | 2,00 | 4,00 |
| ISS19 | 56 | 2,6250 | ,72770 | 1,00 | 4,00 |
| ISS20 | 56 | 2,7500 | ,91949 | 1,00 | 5,00 |
| ISS21 | 56 | 3,0536 | ,44393 | 2,00 | 4,00 |
| ISS22 | 56 | 2,6250 | ,82158 | 1,00 | 4,00 |
| ISS23 | 56 | 2,6071 | ,59325 | 1,00 | 4,00 |
| ISS24 | 56 | 2,9464 | ,58526 | 2,00 | 4,00 |
| GroupPre | 56 | 1,5000 | ,50452 | 1,00 | 2,00 |

**Test Statistics[a]**

| | ISS1 | ISS2 | ISS3 | ISS4 | ISS5 | ISS6 | ISS7 | ISS8 | ISS9 | ISS10 | ISS11 | ISS12 | ISS13 | ISS14 | ISS15 | ISS16 | ISS17 | ISS18 | ISS19 | ISS20 | ISS21 | ISS22 | ISS23 | ISS24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mann-Whitney U | 379,000 | 294,500 | 380,500 | 382,000 | 379,000 | 371,000 | 309,000 | 302,000 | 322,500 | 387,500 | 340,500 | 363,500 | 316,500 | 369,000 | 355,000 | 315,500 | 358,000 | 312,500 | 332,000 | 318,000 | 380,500 | 272,000 | 384,500 | 357,500 |
| Wilcoxon W | 785,000 | 700,500 | 786,500 | 788,000 | 785,000 | 777,000 | 715,000 | 708,000 | 728,500 | 793,500 | 746,500 | 769,500 | 722,500 | 775,000 | 761,000 | 721,500 | 764,000 | 718,500 | 738,000 | 724,000 | 786,500 | 678,000 | 790,500 | 763,500 |
| Z | -,256 | -1,787 | -,206 | -,179 | -,230 | -,371 | -1,450 | -1,656 | -1,210 | -,081 | -,943 | -,511 | -1,370 | -,423 | -,657 | -1,533 | -,625 | -1,388 | -1,098 | -1,284 | -,272 | -2,106 | -,140 | -,675 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asymp. Sig. (2-tailed) | ,798 | ,074 | ,837 | ,858 | ,818 | ,710 | ,147 | ,098 | ,226 | ,935 | ,345 | ,609 | ,171 | ,672 | ,511 | ,125 | ,532 | ,165 | ,272 | ,199 | ,785 | ,035 | ,889 | ,500 |

a. Grouping Variable: GroupPre

## Post-test Mann-Whitney U Results of ICAN Scale

**Ranks**

| | GroupPre | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ICAN1post | Experimental | 28 | 21,68 | 607,00 |
| | Control | 28 | 35,32 | 989,00 |
| | Total | 56 | | |
| ICAN2post | Experimental | 28 | 22,54 | 631,00 |
| | Control | 28 | 34,46 | 965,00 |
| | Total | 56 | | |
| ICAN3post | Experimental | 28 | 22,32 | 625,00 |
| | Control | 28 | 34,68 | 971,00 |
| | Total | 56 | | |
| ICAN4post | Experimental | 28 | 22,98 | 643,50 |
| | Control | 28 | 34,02 | 952,50 |
| | Total | 56 | | |
| ICAN5post | Experimental | 28 | 22,00 | 616,00 |
| | Control | 28 | 35,00 | 980,00 |
| | Total | 56 | | |
| ICAN6post | Experimental | 28 | 24,04 | 673,00 |
| | Control | 28 | 32,96 | 923,00 |
| | Total | 56 | | |
| ICAN7post | Experimental | 28 | 22,36 | 626,00 |
| | Control | 28 | 34,64 | 970,00 |
| | Total | 56 | | |
| ICAN8post | Experimental | 28 | 21,61 | 605,00 |
| | Control | 28 | 35,39 | 991,00 |
| | Total | 56 | | |
| ICAN9post | Experimental | 28 | 20,89 | 585,00 |

| | | | | |
|---|---|---|---|---|
| | Control | 28 | 36,11 | 1011,00 |
| | Total | 56 | | |
| | Experimental | 28 | 21,11 | 591,00 |
| ICAN10post | Control | 28 | 35,89 | 1005,00 |
| | Total | 56 | | |
| | Experimental | 28 | 20,43 | 572,00 |
| ICAN11post | Control | 28 | 36,57 | 1024,00 |
| | Total | 56 | | |
| | Experimental | 28 | 26,70 | 747,50 |
| ICAN12post | Control | 28 | 30,30 | 848,50 |
| | Total | 56 | | |
| | Experimental | 28 | 22,79 | 638,00 |
| ICAN13post | Control | 28 | 34,21 | 958,00 |
| | Total | 56 | | |
| | Experimental | 28 | 22,05 | 617,50 |
| ICAN14post | Control | 28 | 34,95 | 978,50 |
| | Total | 56 | | |
| | Experimental | 28 | 22,59 | 632,50 |
| ICAN15post | Control | 28 | 34,41 | 963,50 |
| | Total | 56 | | |
| | Experimental | 28 | 22,32 | 625,00 |
| ICAN16post | Control | 28 | 34,68 | 971,00 |
| | Total | 56 | | |

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ICAN1post | 56 | 2,3036 | ,78438 | 1,00 | 4,00 |
| ICAN2post | 56 | 2,9107 | ,85868 | 1,00 | 5,00 |
| ICAN3post | 56 | 2,8571 | ,99870 | 1,00 | 5,00 |
| ICAN4post | 56 | 3,7500 | ,93905 | 1,00 | 5,00 |
| ICAN5post | 56 | 3,6071 | 1,12296 | 2,00 | 5,00 |
| ICAN6post | 56 | 3,6429 | 1,08592 | 2,00 | 5,00 |
| ICAN7post | 56 | 2,9107 | 1,04927 | 1,00 | 5,00 |
| ICAN8post | 56 | 3,2321 | ,87368 | 1,00 | 5,00 |
| ICAN9post | 56 | 3,5536 | 1,17426 | 1,00 | 5,00 |
| ICAN10post | 56 | 3,6429 | 1,11890 | 1,00 | 5,00 |
| ICAN11post | 56 | 3,0714 | 1,17330 | 1,00 | 5,00 |
| ICAN12post | 56 | 3,2321 | ,85261 | 1,00 | 5,00 |
| ICAN13post | 56 | 3,3571 | ,98033 | 2,00 | 5,00 |
| ICAN14post | 56 | 2,6607 | 1,04927 | 1,00 | 5,00 |
| ICAN15post | 56 | 3,7857 | 1,00389 | 2,00 | 5,00 |

| | | | | | |
|---|---|---|---|---|---|
| ICAN16post | 56 | 3,1964 | ,96143 | 2,00 | 5,00 |
| GroupPre | 56 | 1,5000 | ,50452 | 1,00 | 2,00 |

**Test Statistics[a]**

| | ICAN1post | ICAN2post | ICAN3post | ICAN4post | ICAN5post | ICAN6post | ICAN7post | ICAN8post | ICAN9post | ICAN10post | ICAN11post | ICAN12post | ICAN13post | ICAN14post | ICAN15post | ICAN16post |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mann-Whitney U | 201,000 | 225,000 | 219,000 | 237,500 | 210,000 | 267,000 | 220,000 | 199,000 | 179,000 | 185,000 | 166,000 | 341,500 | 232,000 | 211,500 | 226,500 | 219,000 |
| Wilcoxon W | 607,000 | 631,000 | 625,000 | 643,500 | 616,000 | 673,000 | 626,000 | 605,000 | 585,000 | 591,000 | 572,000 | 747,500 | 638,000 | 617,500 | 632,500 | 625,000 |
| Z | -3,379 | -2,916 | -2,956 | -2,714 | -3,088 | -2,154 | -2,930 | -3,359 | -3,602 | -3,524 | -3,847 | -,885 | -2,753 | -3,088 | -2,843 | -2,976 |
| Asymp. Sig. (2-tailed) | ,001 | ,004 | ,003 | ,007 | ,002 | ,031 | ,003 | ,001 | ,000 | ,000 | ,000 | ,376 | ,006 | ,002 | ,004 | ,003 |

a. Grouping Variable: GroupPre

## Post-test Mann-Whitney U Results of ICAW Scale

**Ranks**

| | GroupPre | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ICAW1post | Experimental | 28 | 35,71 | 1000,00 |
| | Control | 28 | 21,29 | 596,00 |
| | Total | 56 | | |
| ICAW2post | Experimental | 28 | 33,18 | 929,00 |
| | Control | 28 | 23,82 | 667,00 |
| | Total | 56 | | |

| | | | | |
|---|---|---|---|---|
| | Experimental | 28 | 34,41 | 963,50 |
| ICAW3post | Control | 28 | 22,59 | 632,50 |
| | Total | 56 | | |
| | Experimental | 28 | 35,46 | 993,00 |
| ICAW4post | Control | 28 | 21,54 | 603,00 |
| | Total | 56 | | |
| | Experimental | 28 | 33,48 | 937,50 |
| ICAW5post | Control | 28 | 23,52 | 658,50 |
| | Total | 56 | | |
| | Experimental | 28 | 35,64 | 998,00 |
| ICAW6post | Control | 28 | 21,36 | 598,00 |
| | Total | 56 | | |
| | Experimental | 28 | 35,05 | 981,50 |
| ICAW7post | Control | 28 | 21,95 | 614,50 |
| | Total | 56 | | |
| | Experimental | 28 | 35,32 | 989,00 |
| ICAW8post | Control | 28 | 21,68 | 607,00 |
| | Total | 56 | | |
| | Experimental | 28 | 35,50 | 994,00 |
| ICAW9post | Control | 28 | 21,50 | 602,00 |
| | Total | 56 | | |
| | Experimental | 28 | 34,61 | 969,00 |
| ICAW10post | Control | 28 | 22,39 | 627,00 |
| | Total | 56 | | |
| | Experimental | 28 | 33,93 | 950,00 |
| ICAW11post | Control | 28 | 23,07 | 646,00 |
| | Total | 56 | | |
| | Experimental | 28 | 35,54 | 995,00 |
| ICAW12post | Control | 28 | 21,46 | 601,00 |
| | Total | 56 | | |
| | Experimental | 28 | 34,57 | 968,00 |
| ICAW13post | Control | 28 | 22,43 | 628,00 |
| | Total | 56 | | |
| | Experimental | 28 | 35,54 | 995,00 |
| ICAW14post | Control | 28 | 21,46 | 601,00 |
| | Total | 56 | | |
| | Experimental | 28 | 33,16 | 928,50 |
| ICAW15post | Control | 28 | 23,84 | 667,50 |
| | Total | 56 | | |
| | Experimental | 28 | 33,93 | 950,00 |
| ICAW16post | Control | 28 | 23,07 | 646,00 |
| | Total | 56 | | |

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ICAW1post | 56 | 3,8929 | ,84592 | 2,00 | 5,00 |
| ICAW2post | 56 | 4,0000 | ,89443 | 2,00 | 5,00 |
| ICAW3post | 56 | 3,7143 | ,96699 | 1,00 | 5,00 |
| ICAW4post | 56 | 3,1429 | 1,06904 | 1,00 | 5,00 |
| ICAW5post | 56 | 3,0536 | 1,03431 | 1,00 | 5,00 |
| ICAW6post | 56 | 3,3214 | 1,01098 | 2,00 | 5,00 |
| ICAW7post | 56 | 3,0000 | 1,02691 | 1,00 | 5,00 |
| ICAW8post | 56 | 3,8393 | ,82631 | 2,00 | 5,00 |
| ICAW9post | 56 | 3,9464 | ,90292 | 2,00 | 5,00 |
| ICAW10post | 56 | 3,2143 | ,98561 | 1,00 | 5,00 |
| ICAW11post | 56 | 3,2321 | 1,00889 | 1,00 | 5,00 |
| ICAW12post | 56 | 3,9464 | ,81842 | 2,00 | 5,00 |
| ICAW13post | 56 | 3,5714 | ,95073 | 2,00 | 5,00 |
| ICAW14post | 56 | 3,7321 | ,86321 | 2,00 | 5,00 |
| ICAW15post | 56 | 3,8393 | ,82631 | 1,00 | 5,00 |
| ICAW16post | 56 | 3,7857 | ,77961 | 2,00 | 5,00 |
| GroupPre | 56 | 1,5000 | ,50452 | 1,00 | 2,00 |

**Test Statistics[a]**

| | ICAW1post | ICAW2post | ICAW3post | ICAW4post | ICAW5post | ICAW6post | ICAW7post | ICAW8post | ICAW9post | ICAW10post | ICAW11post | ICAW12post | ICAW13post | ICAW14post | ICAW15post | ICAW16post |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mann-Whitney U | 190,000 | 261,000 | 226,500 | 197,000 | 252,500 | 192,000 | 208,500 | 201,000 | 196,000 | 221,000 | 240,000 | 195,000 | 222,000 | 195,000 | 261,500 | 240,000 |
| Wilcoxon W | 596,000 | 667,000 | 632,500 | 603,000 | 658,500 | 598,000 | 614,500 | 607,000 | 602,000 | 627,000 | 646,000 | 601,000 | 628,000 | 601,000 | 667,500 | 646,000 |
| Z | -3,504 | -2,268 | -2,857 | -3,317 | -2,420 | -3,445 | -3,139 | -3,327 | -3,382 | -2,935 | -2,600 | -3,425 | -2,920 | -3,418 | -2,322 | -2,684 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asymp. Sig. (2-tailed) | ,000 | ,023 | ,004 | ,001 | ,016 | ,001 | ,002 | ,001 | ,001 | ,003 | ,009 | ,001 | ,003 | ,001 | ,020 | ,007 |

a. Grouping Variable: GroupPre

## Post-test Mann-Whitney U Results of IS Scale

**Ranks**

| | GroupPre | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| ISS1post | Experimental | 28 | 35,57 | 996,00 |
| | Control | 28 | 21,43 | 600,00 |
| | Total | 56 | | |
| ISS2post | Experimental | 28 | 35,95 | 1006,50 |
| | Control | 28 | 21,05 | 589,50 |
| | Total | 56 | | |
| ISS3post | Experimental | 28 | 32,39 | 907,00 |
| | Control | 28 | 24,61 | 689,00 |
| | Total | 56 | | |
| ISS4post | Experimental | 28 | 35,39 | 991,00 |
| | Control | 28 | 21,61 | 605,00 |
| | Total | 56 | | |
| ISS5post | Experimental | 28 | 33,41 | 935,50 |
| | Control | 28 | 23,59 | 660,50 |
| | Total | 56 | | |
| ISS6post | Experimental | 28 | 31,86 | 892,00 |
| | Control | 28 | 25,14 | 704,00 |
| | Total | 56 | | |
| ISS7post | Experimental | 28 | 37,63 | 1053,50 |
| | Control | 28 | 19,38 | 542,50 |
| | Total | 56 | | |
| ISS8post | Experimental | 28 | 35,64 | 998,00 |
| | Control | 28 | 21,36 | 598,00 |
| | Total | 56 | | |
| ISS9post | Experimental | 28 | 32,66 | 914,50 |
| | Control | 28 | 24,34 | 681,50 |

| | | | | |
|---|---|---|---|---|
| | Total | 56 | | |
| | Experimental | 28 | 32,79 | 918,00 |
| ISS10post | Control | 28 | 24,21 | 678,00 |
| | Total | 56 | | |
| | Experimental | 28 | 31,98 | 895,50 |
| ISS11post | Control | 28 | 25,02 | 700,50 |
| | Total | 56 | | |
| | Experimental | 28 | 33,45 | 936,50 |
| ISS12post | Control | 28 | 23,55 | 659,50 |
| | Total | 56 | | |
| | Experimental | 28 | 37,54 | 1051,00 |
| ISS13post | Control | 28 | 19,46 | 545,00 |
| | Total | 56 | | |
| | Experimental | 28 | 33,21 | 930,00 |
| ISS14post | Control | 28 | 23,79 | 666,00 |
| | Total | 56 | | |
| | Experimental | 28 | 31,30 | 876,50 |
| ISS15post | Control | 28 | 25,70 | 719,50 |
| | Total | 56 | | |
| | Experimental | 28 | 37,43 | 1048,00 |
| ISS16post | Control | 28 | 19,57 | 548,00 |
| | Total | 56 | | |
| | Experimental | 28 | 35,38 | 990,50 |
| ISS17post | Control | 28 | 21,63 | 605,50 |
| | Total | 56 | | |
| | Experimental | 28 | 37,96 | 1063,00 |
| ISS18post | Control | 28 | 19,04 | 533,00 |
| | Total | 56 | | |
| | Experimental | 28 | 31,30 | 876,50 |
| ISS19post | Control | 28 | 25,70 | 719,50 |
| | Total | 56 | | |
| | Experimental | 28 | 32,05 | 897,50 |
| ISS20post | Control | 28 | 24,95 | 698,50 |
| | Total | 56 | | |
| | Experimental | 28 | 33,00 | 924,00 |
| ISS21post | Control | 28 | 24,00 | 672,00 |
| | Total | 56 | | |
| | Experimental | 28 | 30,00 | 840,00 |
| ISS22post | Control | 28 | 27,00 | 756,00 |
| | Total | 56 | | |
| ISS23post | Experimental | 28 | 30,50 | 854,00 |
| | Control | 28 | 26,50 | 742,00 |

| | | | | |
|---|---|---|---|---|
| | Total | 56 | | |
| | Experimental | 28 | 34,14 | 956,00 |
| ISS24post | Control | 28 | 22,86 | 640,00 |
| | Total | 56 | | |

**Descriptive Statistics**

| | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| ISS1post | 56 | 3,7857 | ,75593 | 2,00 | 5,00 |
| ISS2post | 56 | 3,6250 | 1,18418 | 2,00 | 5,00 |
| ISS3post | 56 | 2,8929 | ,84592 | 1,00 | 5,00 |
| ISS4post | 56 | 2,8214 | 1,06356 | 1,00 | 5,00 |
| ISS5post | 56 | 2,5536 | ,80723 | 1,00 | 4,00 |
| ISS6post | 56 | 3,1250 | ,85413 | 1,00 | 5,00 |
| ISS7post | 56 | 3,8214 | 1,09722 | 2,00 | 5,00 |
| ISS8post | 56 | 3,8929 | ,84592 | 2,00 | 5,00 |
| ISS9post | 56 | 3,3393 | 1,06646 | 1,00 | 5,00 |
| ISS10post | 56 | 2,8929 | ,90812 | 1,00 | 5,00 |
| ISS11post | 56 | 3,1607 | ,73303 | 2,00 | 5,00 |
| ISS12post | 56 | 2,9464 | 1,05175 | 1,00 | 5,00 |
| ISS13post | 56 | 3,8036 | ,90292 | 1,00 | 5,00 |
| ISS14post | 56 | 3,5179 | ,85261 | 2,00 | 5,00 |
| ISS15post | 56 | 3,5000 | ,97234 | 1,00 | 5,00 |
| ISS16post | 56 | 3,8214 | ,85508 | 2,00 | 5,00 |
| ISS17post | 56 | 3,3571 | 1,03447 | 2,00 | 5,00 |
| ISS18post | 56 | 3,8214 | 1,11367 | 2,00 | 5,00 |
| ISS19post | 56 | 3,1429 | ,86189 | 1,00 | 5,00 |
| ISS20post | 56 | 3,1429 | ,88273 | 1,00 | 5,00 |
| ISS21post | 56 | 3,4286 | ,68376 | 2,00 | 5,00 |
| ISS22post | 56 | 2,8393 | ,82631 | 1,00 | 5,00 |
| ISS23post | 56 | 2,9286 | ,65663 | 2,00 | 5,00 |
| ISS24post | 56 | 3,3571 | ,84053 | 1,00 | 5,00 |
| GroupPre | 56 | 1,5000 | ,50452 | 1,00 | 2,00 |

| | IS S1 post | IS S2 post | IS S3 post | IS S4 post | IS S5 post | IS S6 post | IS S7 post | IS S8 post | IS S9 post | IS S10post | IS S11post | IS S12post | IS S13post | IS S14post | IS S15post | IS S16post | IS S17post | IS S18post | IS S19post | IS S20post | IS S21post | IS S22post | IS S23post | IS S24post |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mann-Whitney U | 194,000 | 183,500 | 283,000 | 199,000 | 254,500 | 298,000 | 136,500 | 192,000 | 275,500 | 272,000 | 294,500 | 253,500 | 139,000 | 260,000 | 313,500 | 142,000 | 199,500 | 127,000 | 313,500 | 292,500 | 266,000 | 350,000 | 336,000 | 234,000 |
| Wilcoxon W | 600,000 | 589,500 | 688,000 | 605,000 | 660,500 | 704,000 | 542,500 | 598,000 | 681,500 | 678,000 | 700,500 | 659,500 | 545,000 | 666,000 | 719,500 | 548,000 | 605,500 | 533,000 | 719,500 | 698,500 | 672,000 | 756,000 | 742,000 | 640,000 |
| Z | -3,534 | -3,540 | -1,906 | -3,282 | -2,420 | -1,633 | -4,369 | -3,469 | -1,981 | -2,072 | -1,826 | -2,360 | -4,386 | -2,344 | -1,363 | -4,334 | -3,313 | -4,546 | -1,435 | -1,750 | -2,297 | -,739 | -1,066 | -2,815 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asymp. Sig. (2-tailed) | ,000 | ,000 | ,057 | ,001 | ,016 | ,102 | ,000 | ,001 | ,048 | ,038 | ,068 | ,018 | ,000 | ,019 | ,173 | ,000 | ,001 | ,000 | ,151 | ,080 | ,022 | ,460 | ,287 | ,005 |