

Undergraduate Students' Perceptions of Emojis in Online Text Messaging Conversations

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ABSTRACT

Emojis are used every day and everywhere, especially in online conversations and social media that are regularly used by the new generation. This study focuses on students' perceptions towards positive and negative emojis in online text messaging and how different emojis are seen differently by different people. This quantitative research explored the perceptions of emojis among university students in the Academy of Language Studies at University Technology MARA, Shah Alam. Through an online survey with 100 students, it was discovered that students' gender did not affect their perceptions towards emojis. It was also found that students' emotional intelligence was not correlated with their perception towards the usage of emojis. Further analysis of the questionnaire domains revealed that students' perceptions of communication and language proficiency were not associated with the formality and politeness messaging. In other words, language and communication competence in using emojis in text messages does not determine the formality and politeness in the students' text messaging. The findings of this research paper are important to add more depth into why emojis are used in daily online conversations and ways to understand the different perception towards emojis.

Keywords: Emojis, Text Messaging, Emotional Intelligence, Emotional Valence Theory, Communication

INTRODUCTION

Emojis are a large part of our communication nowadays, especially in digital applications like WhatsApp. It is an integral part of communication that the emojis are used to represent words while maintaining its logical meaning and comprehensibility (Durscheid and Meletis, 2019). According to Kennison et al. (2024), emojis are digital pictures represented online to express emotions and ideas. Emojis are considered non-verbal cues that provide contextual information, emotional state, and personality traits in a person (Aragon and Santos, 2024). Emojis act as a representative of one's emotional state, which can soften the intention of the message and appear more polite. Certain emojis are used to reinforce our intention of sending the message. For example, the hands-together emoji (🙏) lets the reader understand that the message conveys an apology. Even though emojis can be used to show politeness, it needs to be used in moderation as it could also reduce the sender's level of formality with the receiver. Most past studies maintain that emojis are not suitable to be used in formal conversations, especially with strangers or people with a higher position than the speaker (Aragon and Santos, 2024). Emojis can be functional in supporting the intended meaning but only in non-

formal interactions. Positive emojis can also reinforce the intention of being polite in messages as certain emojis are designed to make conversation more cheerful and relatable to the reader. In non-formal conversations, emojis are more likely to be used to replicate how the speaker feels, even sarcasm. Besides using emojis as a form of expression, it also gives clues to the reader to understand how the speaker is feeling without using any words. Since emojis consist of small images of various emotions and objects, it can support communication for people with low language proficiency. Emojis can also compensate for limited vocabulary and grammar in language, making it easier for communication.

Emojis are used in various contexts, such as communication applications and social media posts. Emojis were used as a form of expression during the old days as a self-constructed persona in the contemporary culture of social media. Emojis has a deep historical connection to pictograms and character-based languages which differ from Eastern and Western culture. The first most recognizable emoji was the smiley emoticon “: :)”, which uses various combinations of punctuations, such as parenthesis, colon, semicolon and hyphen. This combination of emoticons was first used in 1881 in the British humour magazine Puck and continued to be used for the next 100 years in printed materials. While Western emoticons were based on typography, Eastern emojis were based on characters, just like Chinese and Japanese characters (Marshall, 2023). As technology evolved, emojis were created in 1999 in Japan created by Shigetaka Kurita deriving from emoticons (example: :-), ;-)). The word “emoji” itself is a Japanese word, with ‘e’ meaning picture and ‘moji’ meaning character (Helsing, 2011 as cited in Kennison et al., 2024).

Humans illustrate a unique communicational system by a representative portraying direct and indirect objects in reality (Bischoff and Palea, 2019). For example, a person can look at an image and understand the nuance or representation behind the image. This helps humans understand their psychological function of representation, creating their perception of the world (Bischoff and Palea, 2019). In 2024, there are 3,790 emojis serving various psychological and linguistic functions in the emoji dictionary website Emoji Counts, that can be used for everyday use in communication applications (Durscheid and Meletis, 2019). These emojis represent human emotions and some reflect people’s daily lives. Some emojis have positive connotations, and some contain negative connotations, demonstrating their usage in daily text communication. Emojis affect the message’s valence (the emotional quality) and the interlocutor receiving the message. Some emojis might not be suitable for professional conversations and might be perceived as incompetent in professional communication. For example, a kissy face emoji might be ideal for romantic and intimate relationships rather than being used in a workplace email. It can also impact messages addressing conflicts in serious situations and is usually “inadequate to be used in serious contexts.” Emojis are typically used with positive connotations as they are associated with fun and less serious, which helps in giving a positive vibe to the message sent (Cavalheiro et al., 2022).

Research about emojis focuses a lot on students and workers and how it affects professional conversations between different receivers. The present research explores the situation further by focusing on the perceptions of how positive and negative emojis students use and how they affect online conversations.

Problem Statement

People of all ages use emojis in their daily conversations, but the factors that influence the usage of emojis are age, identity, social class, and the level of closeness with the recipient. Younger generations use a wide variety of emojis and stickers to enrich their conversation (Wu et al., 2024). Research shows that the younger generation uses more emojis than other ages due to their ability to express their feelings more eloquently. People tend to use emojis when they are feeling relaxed and happy rather than when they are angry or embarrassed. Positive emojis are also used more in conversations than negative emojis or in formal situations (Wu et al., 2024). Different platforms of online communication offer a variety of emojis and stickers, which can cause confusion in understanding and perceiving the context of the conversation (Chiang, Gomez-Zara, 2024).

Kutsuzawa, Umemura, Eto and Kobayashi (2022) maintain that people assess emojis based on the facial features in the emoji, such as the shape of the eyes, mouth, and the accessories associated with the emoji (tear and hearts). This argument is closely related to the Emotional Valence Theory, where people categorize their

experiences into positive, neutral, or negative feelings. The emojis that contained no smiles, intense expressions, coloured faces (green, red or blue) and extra accessories were categorized in the strong negative cluster and high arousal levels, meanwhile for the moderately negative sentiment cluster (the “unsmiling” emojis) were described as “sad, unhappy and depressed” with low valence and moderate arousal levels. Meanwhile, Alburaidi (2023) investigated the perceptions of emojis among a regional group in Saudi Arabia, specifically the Qassimi people. The users’ gender was perceived to influence the use of emojis in which there were significant differences in their usage of emojis. In the general Malaysia context, Paiz (2020) also studied the effect of gender on the perceptions of smiley face emojis. The study showed that men and women did not show any major differences in their attitude of using emojis. This is because the research was done merely due to the genera; appearance of the smiley emoji being used differently across platforms and mobile phones with no factual basis of the connection between gender and emoji usage.

It can be concluded from the above studies that there was a general relationship between gender and emoji usage, but it was done in the context of general users with no categorical focus on student users of emojis. In addition, although these studies were recently done, the users’ emotional aspect was not taken into consideration. Emojis are emotion-based digital pictures used in text messaging; hence the impact of users’ emotional intelligence is an important element that may have a potential effect on the messaging style. Therefore, there is a need to conduct deeper research on the influence of this element on the users. Finally, most of the reviewed past studies had a restrictive focus on cultures and countries other than Malaysia such as in Portugal and Saudi Arabia. This present study sought to categorically address the concern in the local context, specifically, the student users by investigating how Malaysian students’ gender, emotional intelligence, and other relevant constructs differ in terms of their attitude towards emojis in text messaging.

Research Aim and Questions

This research sought to discover the users’ patterns of using emojis in text messaging and the relationships between emotional intelligence and the usage of emojis among undergraduate students. The following research questions have been constructed as follows:

1. Does students’ gender show differences in their overall perceptions of using emojis in their text messaging style?
2. Are there any correlations between students’ emotional intelligence score and their overall perceptions of using emojis in text messaging style among students?
3. Are there any correlations between the Politeness-Formality aspect and the Language Proficiency-Communication aspect in text messaging style among students?

LITERATURE REVIEW

Emojis reflect the emotional state of the sender, even when the listener cannot directly see or look at the sender. Depending on the context of the conversation, emojis play a crucial role in determining the feelings of the sender. Several theories are related to this research involving human perception, and the feelings created from the use of emojis in text messaging. These theories reflect how humans perceive something as positive and negative and whether it can influence their attitude into doing or understanding the message. One of the theories related to the present research is Emotional Valence Theory.

Emotional Valence Theory

According to emotional valence theory, emotional stimuli surround our daily social interactions every day. Valence refers to the positive or negative emotional stimulus contained in information (Kauschke, Bahn, Vesker and Schwarzer, 2019). Upon the receipt of information, humans will form their perceptions by understanding through valency reflected in the message. Valency embedded in information is important as humans tend to categorise their experiences when hearing emotional information whether to perceive it as a positive experience or a negative experience (Kauschke, Bahn, Vesker and Schwarzer, 2019). For example,

humans would pay more attention to emotional-based words such as ‘love’ and ‘hate’ rather than ‘table’ or ‘book.’

Emotional stimuli are crucial for human survival as humans need to process and understand important events

around them for survival (Kauschke, Bahn, Vesker and Schwarzer, 2019). Humans also tend to remember information that has emotional effects on them, especially if it is expressed through words and facial expressions (Kanske and Kotz, 2007; Kousta et al., 2009; Yap and Seow, 2013; Goh et al., 2016 as cited in Kauschke, Bahn, Vesker and Schwarzer, 2019). The reason is that emotionally loaded information can affect human cognition to do good decision-making, good perception of surroundings and great human interaction (Suhaimi, Mountstephens & Teo, 2020), which highlights emotional intelligence in humans.

Since emojis represent emotions, it acts as a visual marker of emotions in online conversations and readers can determine whether the emoji used can be categorized as a positive valence or a negative valence, hence the reason this theory is chosen for this paper. For example, emojis like 😊, 😄 and 😁 can be perceived as a positive valence, meanwhile emojis like 😞, 😓 and 😔 can be perceived as a negative valence. Even though some emojis can be straightforward, a few emojis can give ambiguous meaning depending on the relationship closeness with the receiver. This can cause confusion and miscommunication when using emojis. For example, younger generations like to use the crying emoji (😭) as a reaction of laughing rather than crying, which causes ambiguity of the actual meaning behind the emoji.

Thus, Emotional Valence Theory has a connection with people’s perception towards positive and negative emojis. Emojis play a huge role in online communication as it makes communication more fluid and natural, just like face-to-face communication (Bai et al., 2019). Emotional Valence Theory is relevant for this research as the observation focuses on the positive and negative experiences that people, specifically students feel when receiving emojis from the sender, it can trigger either a positive or negative reaction out of the reader (Kauschke, Bahn, Vesker and Schwarzer, 2019).

The Role of Emojis in Communication

Emojis have influenced the way we communicate over the years, especially in interpersonal communication patterns (Miyake, 2020). Despite its widespread usage and easily recognisable, emojis cannot become an independent language as it can be considered as a descendant of punctuation marks and infographics that can be transformed into little faces that we perceive as faces with emotion (Evans, 2017 as cited by Miyake, 2020). Online conversations can function without emojis and still sound like a regular conversation but adding emojis in the middle or at the end of the conversation can add nuance for readers to believe that is what the intended feeling behind the message sent by the sender.

According to Miyake (2003), as cited by Miyake (2020), emojis are usually found at the end of the sentence, like punctuation marks. To understand the perspective as to why the emojis are put at the end of the sentence, Miyake (2012) conducted an interview with several university students on how they used and interpreted emojis. Some of the reasons given by the university students included: 1) To ensure the balance of colours and shapes of the message, 2) To decorate the message, and 3) To make the messages appear more friendly.

Some students mentioned that they did not have any reason to use emojis in online conversations. To understand the role of emojis, it is mainly used as a modality – the method in which meaning is communicated – for senders to mention how they feel through non-verbal cues. To relate it with the theories mentioned above, emojis can give the perception of social presence as it helps in making the message appear brighter and friendlier. By inserting emojis in conversations despite not entirely having any relation to the conversation or by substituting the word itself with the emoji that has a similar meaning to the word, it helps readers to understand the intended meaning of the sentence despite not needing to reiterate the meaning of the sentence (Miyake, 2020) and adds to the creativity in enhancing the conversation with the reader. Even if the conversation is not being done directly, the use of emojis as non-verbal cues enhances the conversation and makes the reader feel closer to the sender.

The Effect of Emojis in Communication

The evolution of technology allows users, especially in the current generation, to express themselves through various forms of art or medium, and it is particularly obvious nowadays that teenagers, especially high school students and university students tend to use emoji to reflect on their feelings even more clearly. Emojis create clarity for readers and sometimes remove any gaps in written and visual communication, which will then let readers empathize with the emotional message the sender is giving (Aragon and Santos, 2024). Some emojis are used to reflect feelings, but there are other forms of emojis that are more related to objects and entities. These emojis sometimes do not literally reflect the way the truth is shown in real life, rather, it is the way of the speaker's emotional state (Maier, 2022). Therefore, emojis are not understood literally upon first glance; it is highly dependent on the feelings that are attached to the message and the emoji itself to piece together the underlying meaning of the message.

Readers need to understand the intended message behind the usage of certain emojis, as also argued by the emotional valence theory. Humans feel the need to categorize their experiences according to the emotional state attached to the received and sent messages. Due to the complexity of emojis (Bischoff and Palea, 2019), the emoji choices that a person uses every day reflect each person's unique characteristics, which can make it difficult for the message to come across as intended to the recipient (Xue et al., 2017; Receptiviti, 2023 as cited in Kennison et al., 2024). Different perceptions can create bias, where a message can be perceived as either positive to one person or negative to another. Research by Kauschke, Bahn, Vesker and Schwarzer (2019) used the emotional valence theory to see whether humans would react quickly to either positive or negative stimuli in perceiving verbal and/or facial expressions. By focusing on language specifically, it was proven that positive verbal stimuli are much easier to remember than negative stimuli (Unkelbach et al., 2008; Sylvester et al., 2016 as cited by Kauschke et al., 2019). It is a similar case for facial expressions, where people have better perceptions of positive facial expressions as these are easily recognisable and distinct than negative expressions (Leppänen and Hietanen, 2004; Nummenmaa and Calvo, 2015 as cited by Kauschke et al., 2019). This further shows that positive emojis can have a good impact on the receivers' perception and make it easier for the receivers to remember the message compared to negative emojis in online conversations.

Studies on the effects of Gender on the use of Emojis

Previous studies focused on the effects of gender on the use of emoji. To illustrate, quantitative research conducted by Helvira et al. (2024) studied several social media consumers, mainly from the Millennials (born 1981-1996) and Generation Z (born 1997-2012) generation that were randomly selected to answer a survey on how they use emojis across various social media platforms such as Instagram, Twitter, TikTok and WhatsApp. The participants were balanced out between men and women within each sub-group. The survey was distributed via Google Form, and the data collection focuses on demographic questions such as age and sex, the way respondents use emojis, the timing of emoji usage across several social medias, the frequency and type of emoji use, and the context used for certain emojis.

Several studies mention that emoji usage is mostly influenced by gender. Women are much more likely to use emojis in their daily conversations (Helvira et al., 2024) due to the natural response of women being expressive when speaking to people. Men are more used to using cynical emojis and jokes in conversations, meanwhile women are inclined to show warmth and love in conversations (Wolf, 2000; Huffaker and Calvert, 2005 as cited by Helvira et al., 2024). According to Tannen, 1990 as cited by Helvira et al. (2024), historically, men and women have different communication styles, where males would use language that focuses on dominance in conversation while women use more empathetic and cooperative language. Despite the gender stereotypes implied in these emojis, there are also studies about emojis which are not related to gender. In certain online communication domains, men would use the same type of emojis used by females, which shows that emojis are not solely determined by the users' gender.

Studies on the Correlations between Emotional Intelligence and Emoji Usage

Emotional intelligence is crucial in determining whether one can regulate their emotions according to the situation and understand the emotions of other people. Digital communication lacks the option to speak face-

to-face; hence it can be difficult for people to directly observe social cues around them (Dubé et al., 2023). People who possess a high emotional intelligence can fully understand the intended meaning behind the use of emojis in online conversations as they would have high empathy when communicating.

Dubé et al. (2023) studied several adults ranging from ages 18 years old to fill in an online questionnaire using the application Qualtrics and disseminated via the Mechanical Turk to observe the relationship between attachment styles and emoji use, with emotional intelligence as the moderating factor within the relationship contexts (between friends, family, dating or romantic partners, coworkers, customers and clients). The requirement for this research is for the participants to be fluent in English, live in the United States and regularly send and receive text-based messages where emojis are used regularly. A total of 320 participants answered the survey ranging from ages 18 to 69 years old. The online survey covers the participant's demographic information, attachment styles, emotional intelligence, and their emoji usage in conversations. The data was collected for two days from 23 to 25 December 2016. The participation was voluntary, and participants could skip any uncomfortable questions.

According to Dubé et al. (2023), people with high emotional intelligence perceived emojis as the sender's feelings inside the message, meanwhile people with lower emotional intelligence might perceive the emoji as literal, which can make it difficult to relate with the sender. Therefore, this shows that emotional intelligence was very closely related to people's perception towards emoji usage.

Research Gap

There is a significant lack of studies focusing on how emojis are chosen according to the cultural context and personality of the sender. Some emojis have close contact with several cultures around the world and emojis carry different meanings across cultures, hence this has become a research gap around this topic of discussion. Another gap that can be found is the ambiguity behind the use of emojis. This might be an abstract topic to focus on, but it is crucial to understand why some emojis are in the gray area and can be used in both positive and negative perception. This can help clarify and further enhance digital communication among people. There is also a lack of research regarding the difference in emoji design on different platforms. Not all emojis look the same, despite the name being similar. This can cause discrepancies in perceiving the correct intended emotion behind the emoji. By addressing a few of these gaps, future researchers can use these gaps to further explore the perception of emojis and how it can change digital communication between students.

Conceptual Framework

The concept of this research is to dive deeper into how positive and negative emojis affect students' perceptions of online communication. Thousands of emojis exist in the dictionary of emojis that can be used for various purposes, some are straightforward to understand and use in a regular conversation, but some are used with an implied meaning attached to the emojis, making it difficult for some people to have the same perception as the sender. Examples of positive emojis would be the thumbs-up emoji (👍), the red heart emoji (❤️) and the laughing emoji (😂). Negative emojis would give a negative feeling to the readers, such as the thumb down emoji (👎) and the heartbreak emoji (💔). Despite emojis being straightforward to understand, some might have a different perception towards that emoji.

This research has multiple variables for further investigation. The independent variable in this study is the type of emoji, whether it is a positive or negative emoji and the dependent variable that will be used to further study this concept is the students' perception towards that emoji, to observe the emotional response, interpretation and clarity behind that specific emoji usage. This study uses Emotional Valency Theory. This study will also focus on how emotional intelligence affects students' perception towards emojis, whether it is perceived positively or negatively by the reader. This research will also further explore the politeness of using emojis in formal communication, whether emojis make a good impression towards the message or the opposite. By understanding how positive and negative emojis influence students' perception towards the message, it creates a better chance of removing the possibility of misinterpretation in online conversations and further enhancing

online interactions. Future research can focus more on how culture and personality affect the choice of using emojis.

METHODOLOGY

This research focused on using a quantitative approach by focusing on the investigation on how students perceived emojis in their online conversations, how it affected their emotional intelligence in conducting a conversation with people and how it affected their communication and politeness-formality in everyday life. Quantitative research design was suitable for this research because it studied human behaviour and created knowledge about the social world. Quantitative research used sample population to construct numerical data and statistical methods to achieve results to be analysed for further research (Ahmad et al., 2019). This research used a survey as a method of collecting data from the public. A survey is a method of accumulating a substantial amount of data to be analysed in statistical form. The surveys would usually be in a closed-ended questionnaire, which lets the public answer it in a short period. Surveys are used to study attitudes, opinions or trends in a population by observing a sample within the population (McNeill and Chapman as cited in Asenahabi, 2019).

A causal-comparative research design was adopted in the present research. This research design sought to compare pre-existing variables (independent variables) between groups, and to examine whether a cause shows significant differences in the outcome (dependent variables) (Creswell, 2014 as cited in Asenahabi, 2019). The variables examined in this research are gender, different courses among Academy of Language Studies students, their emotional intelligence, their perception towards positive and negative emojis, their English communication skills, their politeness-formality aspect in daily social interactions.

Population And Sampling

The population and sampling were Malaysian students learning language from Academy of Language Studies, University Technology MARA, Shah Alam as it was the most convenient way to achieve greater sample size due to its high accessibility. The students were from different fields of study in the Academy of Language Studies – specifically bachelor’s degree students in English for Professional and Intercultural Communication, Malay Professional Communication, and Arabic for Professional Communication. One of the key requirements to participate in this research was familiarity with using emojis in online conversations and regularly incorporating emojis in their conversations. The age range for this research was from 18 to 25 years old, as the ages of students in University Technology MARA are usually within those ranges. The sampling method was convenient and purposive sampling in which the participants were sampled specifically within the population of the students in the faculty. The survey was disseminated online for students to answer questions. Online surveys were helpful in managing the results and converted into organised data. The sampling size for this research was 121 students, specifically 25 men and 96 women to answer the survey as the population size is not that big in the Academy of Language Studies. It was also very limited to achieve the desired confidence level with a small population size.

Instrumentation and Materials

Since this research used survey as its research methods, the survey was divided into three sections, the first section was the demography of the respondents, the second section was the students’ perception about emojis, with two sub-sections about Communication-Language Proficiency and Formality-Politeness, and the third section was an emotional intelligence survey to determine how emoji usage is related to emotional intelligence. All parts of the survey are mandatory for the respondents to answer to gain accurate information for each respondent. The demography section was the first section to determine the types of students that were responding to the survey. The questions consisted of age, gender, previous level of studies, course, and CGPA. The questions in the second section were based on a past research paper titled “Effect of Emoji in Language and Communication Use of High School Students” by Aragon and Santos (2024). The questions focused on the students’ perception of the role of emoji in communication, the effects of emoji in language and communication through language proficiency and the perception on the effect of emoji usage in different

communication contexts in terms of formality and politeness. This questionnaire section consisted of 19 questions using a 5-point Likert scale to determine students' understanding of perception in emoji.

After the participants answered the demographic section, the next section was the perception towards emoji questionnaire which were separated into two groups of questions. The first group of questions were categorized as Communication-Language Proficiency, which would be called Domain A in this chapter. Domain A has 9 questions asking about each participant's opinion on communication skills using emojis and the language proficiency required to use emojis in conversations. The questions for Communication in Domain A will be listed below:

1. Do emojis make texts easier to convey tone and emotions?
2. Do emojis make conversations more enjoyable?
3. Do emojis help in clarification and avoid misunderstandings?
4. Does adding emojis in texts make it much more relatable to readers?
5. Do you think emojis give off sarcasm and humor in visual form?

The questions for Language Proficiency in Domain A will be listed below:

1. Is it easier to express your emotions using emojis?
2. Do emojis help you understand the emotions in messages better?
3. Does incorporating emojis in texts enhance or find alternative ways and expand your vocabulary?
4. Do emojis help in comprehending the meaning and expressions in texts in different situations?

The second group of questions were categorized as Formality-Politeness, which would be called Domain B in this chapter. Domain B has 10 questions asking about each participant's opinion on the formality required when using emojis in texts and the politeness of using emojis with a certain demographic of people. The questions for Formality in Domain B will be listed as below:

1. Are emojis suitable to be used among formal situations?
2. Do you think using emojis in formal conversations adds a personal and friendly touch?
3. As a student, do you commonly use emojis in formal conversations?
4. Do you think using emojis in formal conversations is considered to be impolite?
5. Do you think using emojis in formal conversations can create a relaxed atmosphere?

The questions for Politeness in Domain B will be listed below:

1. Does emoji give off a positive and friendly manner when used in texts?
2. Does incorporating emojis in texts enhance the clarity in terms of emotions, tone and intention?
3. Do emojis tend to express politeness in text messages?
4. To what extent do you agree that emojis help convey politeness and emotional context in digital communication?
5. Does using emoji help convey politeness more effectively?

The four constructs in each domain were combined based on a research paper titled “Effect of Emoji in Language and Communication Use of High School Students” by Aragon and Santos (2024).

In the prior studies, each of the constructs was researched distinctively to focus more on how emojis were interpreted by the students, but in this paper, the constructs were combined to ensure the analysis is more straightforward to understand. The constructs are closely related to each other, such as Communication and Language Proficiency, where both are required to achieve proper information transfer where both parties have the same understanding of the situation. In the context of this research, both constructs are required to ensure non-verbal cues can still be transmitted in written text (Aragon and Santos, 2024). Formality and Politeness are closely related as politeness is required in a formal setting, hence why both constructs were combined in this research. Based on past papers, the students agree that the usage of emojis is much more suitable to be used in informal situations and found that using emojis in formal conversations can be considered as rude and inappropriate. Despite that, the students also agree that using emojis help convey non-verbal cues even more as it enhances politeness and delivers the message in a friendly manner (Aragon and Santos, 2024). This current study will focus within the context of Academy of Language Studies students to assess whether the results would match with past studies or not.

The third section was based on a questionnaire by Petrides (2009) known as Trait Emotional Intelligence Questionnaire (TEIQue-SF). This questionnaire consisted of 30 questions with a 7-point Likert scale. The response categories for both Likert scales are shown in Table 1 and Table 2 as follows:

Table 1: 5-Point Likert Scale

5-POINT LIKERT SCALE	
5	Strongly Agree
4	Agree
3	Neutral
2	Disagree
1	Strongly Disagree

Table 2: 7-Point Likert Scale

7-POINT LIKERT SCALE	
7	Strongly Agree
6	Agree
5	Somewhat Agree
4	Neither Agree nor Disagree
3	Somewhat Disagree
2	Disagree
1	Strongly Disagree

There was research scarcity in terms of the relationship between perception of emojis and emotional intelligence, especially in using the Trait Emotional Intelligence Questionnaire. One past research was found using the Trait Emotional Intelligence Questionnaire by Völker and Mannheim (2021), which also studied the perceptions of emojis used in an online communication application, WhatsApp. It was logical to conduct an emotional intelligence questionnaire to observe how people communicate and apply emojis according to the suitability of the conversation. The Trait Emotional Intelligence Questionnaire was used to assess stable characteristics that have a relationship with emotional processing, which further helps in studying consistent patterns in emoji interpretation. This questionnaire can help assess the intention and perception of emojis used in online conversations.

Data Collection and Analysis Procedures

This research was mainly administered online using Google Form as it was more flexible than the traditional printed surveys. The survey was distributed between 20 May 2025 until 10 June 2025, spanning for about 22 days. After the survey had reached the estimated number, the survey was then closed and exported into excel file for cleaning and organising purposes. Afterwards, the clean data was transferred from excel into an SPSS application. Two statistical tests which were independent sample t-test and Pearson correlation coefficient were used to analyse the relevant sets of data to help address all three research questions.

To ensure that the research is valid and reliable for future research, a statistical measure in SPSS called Cronbach's Alpha report was used to measure the internal consistency of the research. The scale of the research is considered reliable if the alpha value is more than 0.75. Ensuring the validity of this research is critical to achieve beneficial results of this research (Sürücü and Maslakçi, 2020). Reliability analyses of the survey data were performed using Cronbach's Alpha tests as reported in the following tables.

Table 3: Reliability Analysis for Emotional Valence Perception Scale

Table 3: Reliability Analysis for Emotional Valence Perception Scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.820	.833	19

Table 4: Reliability Statistics for Online Communication Emoji Scale (30 Items)

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.894	.892	30

Table 5: Internal Consistency of Student Emoji Interpretation Scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.863	.875	9

Table 6: Scale Reliability for Text Message Tone Perception (10 Items)

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.834	.840	10

Studies Program	Number of Male Participants	Number of Female Participants
English for Professional Communication (LG240)	13	56
Malay Language for Professional Communication (LG241)	7	12
Arabic Language for Professional Communication (LG242)	2	2
English for Intercultural Communication (LG243)	3	26
TOTAL	25	96

Based on Tables 3, 4, 5 and 6 above, each section of the questionnaire was checked for its reliability to be used in the research. Table 3 is the calculation made for the reliability of the questionnaire, which is the overall perception towards emoji. To assess the reliability of the perception towards emoji scale, Cronbach's Alpha was calculated, yielding a coefficient of 0.820. This result indicates a good internal consistency among the items, confirming that they effectively measure the same underlying construct. For Table 4, the image is the calculation made for the reliability of the questionnaire, which is emotional intelligence. To assess the reliability of the emotional intelligence scale, Cronbach's Alpha was calculated, yielding a coefficient of 0.894. This result indicates an excellent internal consistency among the items, confirming that they effectively measure the same underlying construct. For Table 5, the image is the calculation made for the reliability of the questionnaire, which is Domain A's questions. To assess the reliability of Domain A's scale, Cronbach's Alpha was calculated, yielding a coefficient of 0.863. This result indicates a good internal consistency among the items, confirming that they effectively measure the same underlying construct. Lastly, Table 6 is the calculation made for the reliability of the questionnaire, which is Domain B's questions. To assess the reliability of Domain B's scale, Cronbach's Alpha was calculated, yielding a coefficient of 0.834. This result indicates a good internal consistency among the items, confirming that they effectively measure the same underlying construct.

Ethical Considerations

When conducting research, the most important part is keeping the respondents' information confidential and private to ensure and uphold their trust in collecting their information for this research. Ethical considerations include informing participants on what the research entails and mentioning their consent in answering the survey before disclosing any important information about the research. By properly disclosing the contents of the research and creating handwritten consent, it gives respondents the opportunity to be well-informed. Having ethical conduct as a researcher reflects the integrity and honesty of the researcher. By disclosing respondents' identity, it can lead to illegal use of stolen identity, which can risk the respondents and the research itself (Kang and Hwang, 2021).

In the description section, this research explicitly stated written consent given by the respondent upon answering the questionnaire. Respondents were required to click on the checked box to agree into joining this research. Besides acquiring consent from the respondents, the survey also stated the type of research conducted to give clarification to respondents as part of ethical considerations, as suggested in Kang and Hwang (2021).

Results and Discussion

Studies Program	Number of Male Participants	Number of Female Participants
English for Professional Communication (LG240)	13	56
Malay Language for Professional Communication (LG241)	7	12
Arabic Language for Professional Communication (LG242)	2	2
English for Intercultural Communication (LG243)	3	26
TOTAL	25	96

Demographics of the Sample

The respondents of the survey were students from the Academy of Language Studies in University Technology MARA, Shah Alam.

The survey demographics of the participants included the students' age, gender, previous level of studies, course within the faculty and overall CGPA. The respondents were students from English for Professional Communication (LG240), Bahasa Melayu for Professional Communication (LG241), Arabic for Professional Communication (LG242) and English for Intercultural Communication (LG243) in mixed semesters ranging from semester 1 until 6. All the respondents had consented to join this survey.

Age:

121 responses

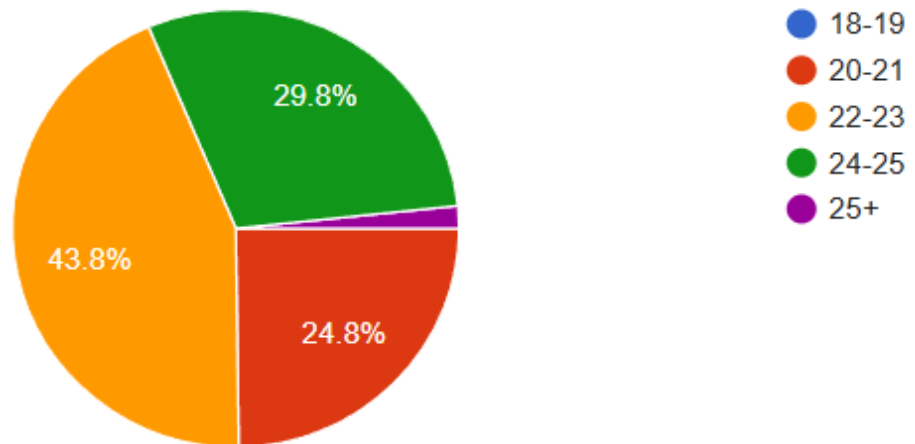


Figure 1: Pie chart of participants' ages

As shown in Figure 1, the respondents' age ranged from 20 years old to above 25 years old, with 24.8% of respondents aged between 20-21, 43.8% aged 22-23 being the largest age group, 29.8% aged 24-25 and the smallest age group with 1.7% aged 25 years old and above. A pie chart of the participants' ages. The age range was limited to 18 to 25 years old, as undergraduate students begin pursuing their bachelor's degree at 19 years old and complete within their mid-twenties on average (StudyMalaysia.com, 2024).

Gender:

121 responses

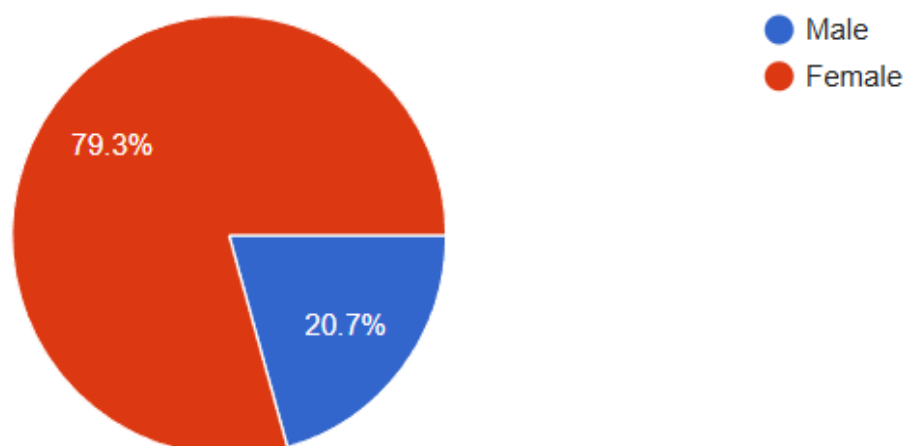


Figure 2: Pie chart of participants' gender

Figure 2 shows a pie chart of the respondents' gender. It shows that more than half of the respondents (79.3%) were female while 20.7% of respondents were men. This proportion aligned with the population make-up as there were more female students pursuing their Bachelor's Degrees in this academy than male students.

Previous Level of Studies:

121 responses

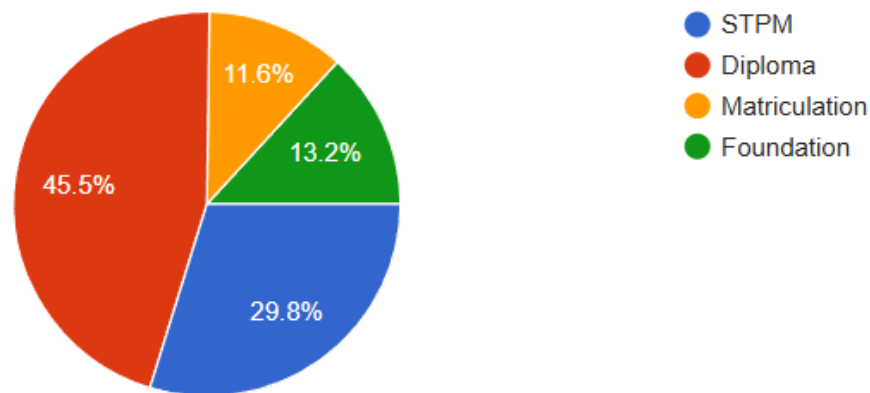


Figure 3: Pie chart of participants' previous level of studies

Figure 3 shows the participants' previous levels of study. Majority of the student respondents (45.5%) were holders of diploma level programs from Malaysian universities and colleges. The second biggest group (29.8%) were dominated by students from Sijil Tinggi Pelajaran Malaysia (STPM) which was a national certification level taken at the age of 18-19 years old. The last two groups formed the smallest numbers with 13.2% and 11.5% which were students from Foundation programs and Matriculation programs respectively.

Course:

121 responses

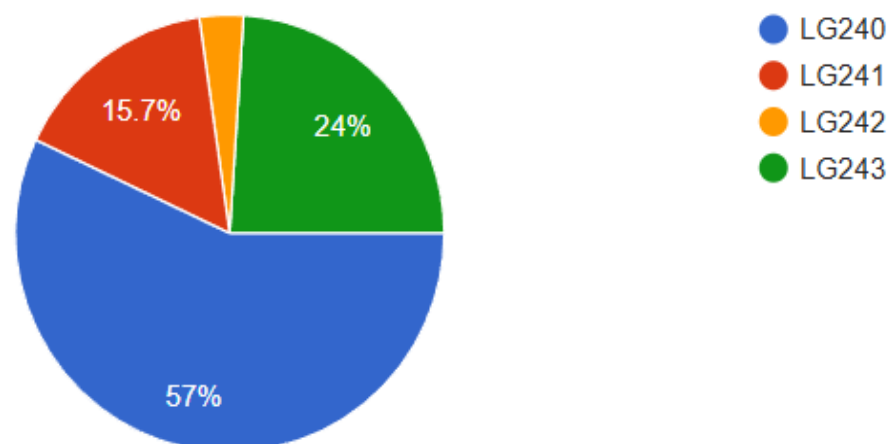


Figure 4: Pie chart of participants' course in Academy of Language Studies

As presented in Figure 4, most of the respondents came from English for Professional Communication (LG240) students with more than half of the overall respondents (57%), as it was one of the most well-known courses in the Academy of Language Studies. The second highest percentage is from English for Intercultural

Communication (LG243) with 24% participants. The third highest was from Bahasa Melayu for Professional Communication (LG241) with 15.7% and the last one was Arabic for Professional Communication (LG242) with 3.3%.

CGPA:

121 responses

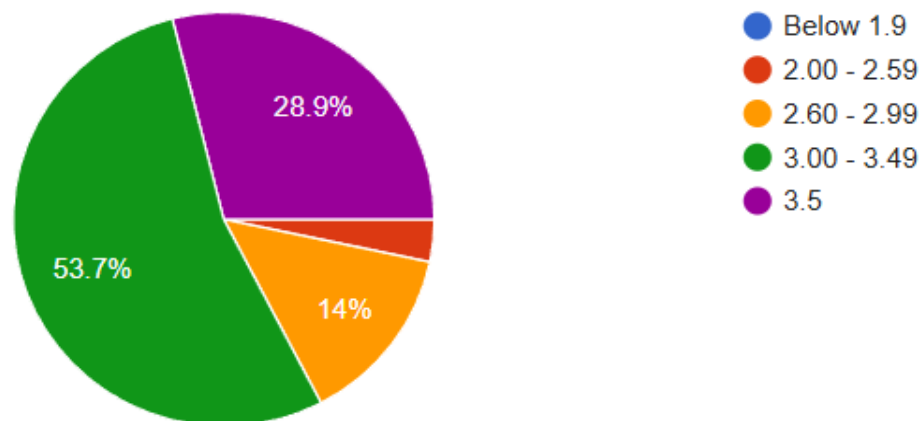


Figure 5: Pie chart of participants' CGPA from semester 1 until 6

Figure 5 shows that the last demographic question was the students' overall CGPA throughout all semesters. The breakdown for the range of the CGPA marks were divided into 5 points, which were "Below 1.9," "2.00-2.59," "2.60-2.99," "3.00-3.49" and "3.5." As seen in the pie chart, there were no students who achieved CGPA "Below 1.9," and the highest pointer on average is the "3.00-3.49" with 53.7%. The second highest pointer on average is the "3.5" with 28.9%. The third highest pointer is the "2.60-2.99" with 14% and the last one is the "2.00-2.59" pointer with 3.3%. This gives the indication that most Academy of Language Studies students were able to achieve the highest pointers starting from 3.00 until 3.5 on average throughout the semester.

Research Question 1: Does Students' Gender Show Differences in Their Overall Perceptions of Using Emojis in Their Text Messaging Style?

Table 8: Group Statistics

	Male vs Female	N	Mean	SD	Std. Error of Mean
Total Emoji Score	Male	25	74.8	7.86	1.57
	Female	96	71.8	8.71	.889

Table 9: Independent Sample T-Test

		Levene's Test for Equality of Variances		
		F	Sig.	t
Total Emoji Score	Male vs Female			
	Male	.240	.625	1.561
	Female			1.658

The first research question used T-test to analyse the differences between gender and overall emoji perception. The results of the T-test are as follows:

Tables 8 and 9 respectively show group statistics and independent sample t-tests on the gender differences in their overall perceptions towards emojis in their text messaging style between 121 students from the Academy of Language Studies. The Male Group ($M=74.8$, $SD=7.86$) showed a higher Mean score than the Female Group ($M=71.8$, $SD=8.72$), thus indicating that Males use more emojis than female on average and the difference was not statistically significant as $t(119)=1.561$, $p=0.121$. The effect size ($d=0.35$) shows that it was a small to moderate difference. It can be concluded that gender does not have any meaningful effect on their perception towards emoji usage in text messaging style.

Research Question 2: Are there any correlations between students' emotional intelligence score and their overall perceptions of using emojis in text messaging style among students?

Table 10: Pearson Correlation between Total Emoji Perception and Emotional Intelligence

Total EQ Score					
Total Emoji Score	Pearson Correlation	.100			
	Sig. (2-tailed)	.274			
	N	121			
	Male vs Female	N	Mean	SD	Std. Error of Mean
Total Emoji Score	Male	25	74.8	7.86	1.57
	Female	96	71.8	8.71	.889

This analysis applied the Pearson correlation test to find the correlation between emotional intelligence and students' perception towards emoji use in text messages. The results are shown below:

A Pearson correlation analysis was conducted to investigate the relationship between students' emotional intelligence and their perception towards emoji in text messaging style among a sample of 121 university students. The results revealed a very weak positive correlation ($r=0.100$), indicating that emotional intelligence has no meaningful relationship between emotional intelligence and perception towards emoji by students. This correlation was not statistically significant, with a p-value of 0.274, suggesting a high likelihood that this relationship may have occurred only by chance instead of the effect of the variable. The strength of the correlation ($r=0.100$) indicates that it has weak association, meaning that it might have a small effect on each other but do not have a strong relationship with one another.

It can be concluded that students' emotional intelligence did not have any relationship with their perceptions of students using the emoji, which also suggests that emoji perception is a separate issue than emotional intelligence and one does not require to have high emotional intelligence to have different perceptions of emojis in text messages. Therefore, the results do not support the research question of whether students' emotional intelligence had a close association with their overall perception towards emojis in text messaging style.

Research Question 3: Are there any correlations between the Politeness-Formality aspect (Domain B) and the Language Proficiency-Communication aspect (Domain A) in text messaging style among students?

Table 11: Pearson Correlation between Proficiency-Communication Domain and Politeness-Formality Domain

Proficiency-Communication Domain	Politeness-Formality Domain	
	Pearson Correlation	.095
	Sig. (2-tailed)	.300
	N	121

The third research question demonstrates the correlation between the Politeness-Formality aspect (Domain B) and the Language Proficiency-Communication aspect (Domain A) within the overall perception towards emojis. This analysis applied the Pearson correlation test to find the correlation between Domain A and Domain B within the emoji context. The results are shown below:

A Pearson correlation analysis was conducted to investigate the relationship between Domain A and Domain B among a sample of 121 university students. The results revealed a very weak positive correlation ($r=0.095$), indicating that there was no relationship between Domain A and Domain B. This correlation was not statistically significant, with a p-value of 0.300, suggesting a high likelihood that this relationship may have occurred by chance.

These findings imply that the four constructs are not required when texting someone with emojis incorporated in the text. The strength of the correlation ($r=0.095$) falls within the range typically interpreted as a very weak association, which means both domains are not critically required when texting someone with emojis. In conclusion, the result does not support the research question of the correlation between Politeness-Formality aspect and Language Proficiency-Communication aspect.

DISCUSSION & CONCLUSION

This research explored how emojis are used in online conversations among university students and whether gender has any effect on their perception towards emoji, the correlation between students' emotional intelligence and overall perception towards emoji and the correlation between the politeness-formality aspect and language proficiency-communication aspect if it would affect their text messaging style.

It can be found that gender did not affect their perception towards emoji usage, which differs from past studies that found that men usually use variety of emojis in their conversations and less emojis, which can make them appear more appropriate and attractive, meanwhile women tend to use emojis positively and persistently and the more they use emojis in conversations, the more attractive they appear (Bai et al., 2019).

In addition, emotional intelligence did not have a strong correlation with students' perception towards emojis. Despite not having a strong correlation to one another, past studies discovered that people with high emotional intelligence are able to perceive the intention behind the emoji even though it was not communicated literally and people with lower emotional intelligence might not be able to perceive the emoji beyond the actual meaning of the emoji (Dubé et al., 2023). The contradictory findings shown by the students of Academy of Language Studies may be a unique case that is open to further analysis and deeper examination.

The correlation between the politeness-formality and language proficiency-communication aspect was also not strong as using emojis does not require high communication skills, language proficiency, formality or politeness. These findings are not aligned with the past studies in which most of the participants in past studies agreed that using emojis need to be done in a respectful manner and used in formal situations, thus suggesting a unique pattern and perception shown by these students. In the past studies, it was mostly agreed that emojis are used in conversations to express politeness even better than without emojis. Emojis are also supposed to be used to provide more clarification in text messaging and enhance one's creativity when conversing. It also adds clarification and assists in expressing one's emotions and intentions in a non-face-to-face conversation (Aragon and Santos, 2024).

Some justification can be offered to the unique findings of the research. One of the potential reasons is the big difference in sample size in terms of the gender and programs which could be the contributing factors of the patterns. The differences could also be due to differences in cultural factors or personality differences. Some people use emojis to express themselves in their own personal and unique manner, meanwhile there are also people who use other visual ways or methods to express themselves rather than using emojis, suggesting the possible lack of emojis applicability to students from this university.

Finally, this research has contributed to the existing research as it has different results from past research papers. It can be studied further as to why the results differ from previous research in terms of their cultures, personality of everyone, or the unique messaging pattern possibly adopted by the students.

Future research can be done to further explore this unique pattern and diversified with different sample types which can offer more insightful knowledge on the use of emojis from other perspectives. To explore this topic further, it is highly recommended for the researchers to employ a bigger sample size that might yield different results. Broadening the participant pool to achieve equitable gender distribution and representation from several academic institutions would significantly enhance the external validity of the findings. Furthermore, integrating variables such as cultural background and personality traits could uncover distinctive behavioural trends that might otherwise remain hidden. Research has shown that gender diversity in research samples not only improves the robustness of results but also reduces bias, leading to more inclusive and reliable conclusions (Wu, 2023). This approach ensures that the study reflects a wider spectrum of perspectives, thereby strengthening its applicability across diverse educational contexts.

REFERENCES

1. Ahmad, S., Wasim, S., Irfan, S., et al. (2019). Qualitative v/s. Quantitative Research – A Summarized Review. *J. Evid. Based Med. Healthc.* 2019; 6(43), 2828-2832. <https://doi.org/10.18410/jebmh/2019/587>
2. Alburaidi, A. M. (2023). Gender Differences in the Use of Emojis Among Genders. *International Journal of English Linguistics*, 13(5), 45-58. <https://doi.org/10.5539/ijel.v13n5p45>
3. Aljasir, S. (2024). Emoji as a social presence tool among Arab digital media users: Do the demographic variables of the sender play a role? *Social Science Computer Review*, 42(1), 270-284. <https://doi.org/10.1177/08944393231181638>
4. Aragon, J. M. L., Santos, B. G. (2024). Effect of emoji in language and communication use of high school students. *EPRA International Journal of Multidisciplinary Research*. 10(1), 295-304. https://www.researchgate.net/profile/Jhoana-Marie-Aragon/publication/377928150_Effect_of_EMOJI_in_Language_and_Communication_Use_of_High_School_Students/links/65bda5a379007454975ff3a8/Effect-of-EMOJI-in-Language-and-Communication-Use-of-High-School-Students.pdf
5. Asenahabi, B. M. (2019). Basics of research design: A guide to selecting appropriate research design. *International Journal of Contemporary Applied Researches*, 6(5), 76-89. <https://www.ijcar.net/assets/pdf/Vol6-No5-May2019/07.-Basics-of-Research-Design-A-Guide-to-selecting-appropriate-research-design.pdf>
6. Bai, Q., Dan, Q., Mu, Z., and Yang, M. (2019). A Systematic Review of Emoji: Current Research and Future Perspectives. *Front. Psychol.* 10:2221. <https://doi.org/10.3389/fpsyg.2019.02221>
7. Barroso, C. (2013). Context, information's meaning, and perception. 8th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2013). (pp. 549-553). Atlantis Press. <https://doi.org/10.2991/eusflat.2013.77>
8. Behzadpoor, S. F. (2023). Brown and Levinson's politeness theory revisited: Rejection or acceptance?. *Applied Linguistics Inquiry*, 1(1), 74-82. <https://doi.org/10.22077/ali.2022.5755.1006>
9. Bischoff, A. V., & Palea, A. (2019). A communicational analysis of the evolution of symbolic language. Case study: emojis. *Professional Communication and Translation Studies*, 12, 59-71. http://www.sc.upt.ro/attachments/article/406/02_03_Bischoff_Palea.pdf
10. Cavaleiro, B. P., Prada, M., Rodrigues, D. L., Lopes, D., & Garrido, M. V. (2022). Evaluating the adequacy of emoji use in positive and negative messages from close and distant senders.

- Cyberpsychology, Behavior, and Social Networking, Advance online publication. <https://doi.org/10.1089/cyber.2021.0157>
11. Chiang, C., & Gomez-Zara, D. (2024). The Evolution of Emojis for Sharing Emotions: A Systematic Review of the HCI Literature. arXiv preprint arXiv:2409.17322. <https://doi.org/10.48550/arXiv.2409.17322>
 12. Dubé, S., Gesselman, A. N., Kaufman, E. M., Bennett-Brown, M., Ta-Johnson, V. P., Garcia, J. R. (2024). Beyond words: Relationships between emoji use, attachment style, and emotional intelligence. PLoS ONE 19(12): e0308880. <https://doi.org/10.1371/journal.pone.0308880>
 13. Durscheid, C., Meletis, D. (2019). Emojis: a grapholinguistic approach. Zurich Open Repository and Archive. <https://doi.org/10.36824/2018-graf-duer>
 14. Eztalks. (n.d.). What is Online Communication? Eztalks. <https://eztalks.com/video-conference/what-is-online-communication.html>
 15. Helvira, J., Purba, G. S., Ayudira, Christine, H., Syahfitri, R. (2024). The Role of Gender and Age in the Use of Emoji on Social Media among Millennials and Gen Z. *Linguistica*. Vol. 13, No. 04, Jul 2024, (259-268). <https://doi.org/10.24114/jalu.v13i4.64954>
 16. Indeed. (2025). What Is Language Proficiency? Definition and Levels. <https://sg.indeed.com/career-advice/resumes-cover-letters/what-is-language-proficiency>
 17. Kang, E., Hwang, H. J. (2021). Ethical Conducts in Qualitative Research Methodology: Participant Observation and Interview Process. *Journal of Research and Publication Ethics*, Vol 2 No 2 (2021), 5-10. <http://dx.doi.org/10.15722/jrpe.2.2.202109.5>
 18. Kauschke, C., Bahn, D., Vesker, M. and Schwarzer, G. (2019). The Role of Emotional Valence for the Processing of Facial and Verbal Stimuli — Positivity or Negativity Bias? *Front. Psychol.* 10:1654. <http://doi.org/10.3389/fpsyg.2019.01654>
 19. Keiling, H. (2025). What Is Emotional Intelligence? Definition, Key Elements and Examples. Indeed.com. <https://www.indeed.com/career-advice/career-development/emotional-intelligence>
 20. Kennison, S.M., Fritz, K., Hurtado Morales, M. A. and Chan-Tin, E. (2024). Emoji use in social media posts: relationships with personality traits and word usage. *Front. Psychol.* 15:1343022. <http://doi.org/10.3389/fpsyg.2024.1343022>
 21. Kutsuzawa, G., Umemura, H., Eto, K., & Kobayashi, Y. (2022). Classification of 74 facial emoji's emotional states on the valence-arousal axes. *Scientific Reports*, 12(1), 398. <https://doi.org/10.1038/s41598-021-04357-7>
 22. Maier, E. (2022). Emojis as pictures. <https://doi.org/10.1038/s41598-021-04357-7>
 23. Marshall, P. D. (2023). The Presentation of the Pictogrammatic “Self” and Persona: Emoji’s Historical Emergence and Proliferation in Digital Culture. *Persona Studies*, 9(1), 52-70. <https://doi.org/10.21153/psj2023vol9no1art1913>
 24. Mathias, C. (n.d.). text messaging (texting or wireless messaging). TechTarget. <https://www.techtarget.com/searchmobilecomputing/definition/texting>
 25. Kazuko, M. I. Y. A. K. E. (2020). Evolution of emoji and beyond: A diachronic observation of visual representations in Japanese mobile media. *東洋大学人間科学総合研究所紀要*, 22, 1-15. https://toyo.repo.nii.ac.jp/record/12385/files/ningenkagaku22_001-015.pdf
 26. Oxford Learner’s Dictionaries. (n.d.). Definition of Formality Noun from the Oxford Advanced Learner’s Dictionary. <https://www.oxfordlearnersdictionaries.com/definition/english/formality?q=formality>
 27. Paiz, R. (2020). A Study on Gender Differences in Emoji Usage. *International Young Scholars Journal of Languages*. <https://kulliyyah.iium.edu.my/klm/wp-content/uploads/sites/14/2022/04/Gender-Differences-in-Emoji-Usage.pdf>
 28. Petrides, K. V. (2009). Psychometric properties of the Trait. Emotional Intelligence Questionnaire. In C. Stough, D. H. Saklofske, and J. D. Parker, *Advances in the assessment of emotional intelligence*. New York: Springer. http://doi.org/10.1007/978-0-387-88370-0_5
 29. Sjoraida, D. F., Nugraha, A. R., Guna, B. W. K., Ali, M., Arifin, A. H., Nomleni, A. P., Hendrik., and Arifin, D. (2024). Exploring the Role of Nonverbal Communication in Interpersonal Relationships: A Study of Gestures, Postures and Proxemics. *EScience Humanity Journal*, 4(2), 565-573. <https://www.idebahasa.or.id/escience/index.php/home/article/view/179>

30. StudyMalaysia.com. (2024). A Glance at The Malaysian Education System. StudyMalaysia.com. <https://studymalaysia.com/international/the-national-education-system/a-glance-at-the-malaysian-education-system>
31. Suhaimi, N. S., Mountstephens, J., Teo, J. (2020). EEG-Based Emotion Recognition: A State-of-the-Art Review of Current Trends and Opportunities. *Hinduri Computational Intelligence and Neuroscience*. Volume 2020, Article ID 8875426, 19 pages. <https://doi.org/10.1155/2020/8875426>
32. Sürücü, L., Maslakçı, A. (2020). Validity And Reliability In Quantitative Research (Nicel Araştırmada Geçerlilik Ve Güvenilirlik). *BMIJ*, (2020), 8(3): 694-2726, <http://dx.doi.org/10.15295/bmij.v8i3.1540>
33. Vedantu. (n.d.). What is Communication in English? Types, Meaning, and Importance in Everyday Life. <https://www.vedantu.com/commerce/communication>
34. Völker, J., Mannheim, C. (2021). Tuned in on senders' self-revelation: Emojis and emotional intelligence influences interpretation of WhatsApp messages. *Computers in Human Behavior Reports*, 3 (2021) 100062. <https://doi.org/10.1016/j.chbr.2021.100062>
35. World Health Organization. (n.d.). Gender and health. https://www.who.int/health-topics/gender#tab=tab_1
36. Wu, D., Zhang, X., and Zhang, X. (2024). Is there an intergenerational discrepancy in the comprehension and aesthetic preference regarding emoji usage? Evidence from WeChat. *Front. Psychol.* 15:1424728. <http://doi.org/10.3389/fpsyg.2024.1424728>
37. Wut, T. M., Ng, P. M., Low, M. P. (2023). Engaging university students in online learning: a regional comparative study from the perspective of social presence theory. *Journal of Computers in Education*. (2024) 11(3):763–789. <https://doi.org/10.1007/s40692-023-00278-8>
38. Wu, C. (2023). The gender citation gap: Why and how it matters. *Canadian Review of Sociology*, 60(2), 188–211. <https://doi.org/10.1111/cars.12428>