

Investigating Different Age Groups' Preferences and Purposes of Emoji Use

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Abstract

The research explored how much people of different age use emoji in digital communication. It also studied the purposes behind the use. The study compared three different age groups. It aimed to find if there are any significant differences among groups. Different aspects of emoji use are researched worldwide but there is less evidence from age perspective. There is very little research done in Pakistani context. So, this study may add to the knowledge in the field in Pakistani context. A representative sample was chosen from intermediate, undergraduate and postgraduate students through quota sampling from colleges and universities from Hyderabad, Sindh in 2017. The participants filled the questionnaire and data is analyzed quantitatively. The study explored if emoji are effective for all generations or a specific generation. The study might help in understanding different attitudes towards use of emoji.

Keywords: *Computer Mediated Communication (CMC), Emoji*

1. Introduction

Today, in the age of digital communication when we are shifting more towards communicating through texts than verbal. It gets harder to communicate exactly what one wants to communicate. In verbal communication, use of gestures, intonation, stress, and other non-verbal cues help interpret the message better. But when it comes to interpreting a direct text from someone, it gets harder to infer the intended meaning. With the development of emojis, the problem was solved to an extent. But still, different people hold different beliefs regarding its use. Some use those frequently and love them, others avoid those to avoid any misinterpretation.

This research investigated how people of different ages prefer to use emojis. It also investigates why people of different ages use the emojis in digital communication. It explored the extent to which the use is helpful or hindering.

The objectives of the study are:

- To investigate the emoji preferences in CMC of different age groups.
- To compare the emotion expressed through emoji among different age groups
- To investigate the purpose of using Emoji in CMC of different age groups.

Today, as the modes of communication are being transformed so is the use of language. Worldwide, people have significantly shifted to CMC to communicate. Many are using emoticons and emoji in CMC as an alternative to non-verbal cues in Face to Face (FtF) communication. Although, emoji are widely used but the question has significantly remained unanswered if those are perceived in same way by everyone. Different people have got different preferences even on use of emoji. The study aims to explore whether these emoji are effective for all generations or have merely helped a specific generation.

2. Literature Review

Language is traditionally defined as a system of communication. Methods of communication are constantly changing to adapt the social trends, lifestyles and technology so is the language.

The process of communication is so complex, it is not a mere interpretation of words. Language is the combination of both verbal as well as nonverbal cues. The Non-verbal type of communication is represented in conveying messages through some non-words rudiments. Forms of non-verbal interactions include gestures, eye contact, facial expressions, body language, etc. The main features of non-verbal cues are “ability to convey emotions and attitude” as well as “emphasize, contradict, substitute or regulate verbal communication” (Wei, A. C. Y. ,2012 cited in Jibril & Abdullah, 2013).

With the development of technology, there has been a significant shift in communication methods. Much of communication today takes place through digital means and is Computer-Mediated. Alshenqeeti, (2016):

The rise of mobile communication devices initially raised concerns from traditionalists in the linguistic community and elsewhere that language was becoming terse and short and vital communication cues, particularly non-verbal ones were being lost, devaluing overall communicative ability. There is, however, a counter-argument which recognizes that language comes in many forms, and one of these is the use of emoji and emoticon.

Initially, before the excessive use of emoticons and emoji in mainstream, CMC was quite debatable. At the times when the nonverbal cues were not present in CMC, sending the accurate and indented message impact was difficult through CMC. Comparing face-to-face (FtF) and CMC, Fuller (1996) discovered that people who used electronic media often, tend to misinterpret other individuals’ personalities in several dimensions. However, with the introduction of emoticons and emoji, the problem seems to be resolved. Fuller’s study (1996) also found that the people who used electronic media often thought of their partners as cold and logical, which suggested that emotional expression was limited. Though, human emotions have now got an entirely new way to be expressed in CMC with the help of emoticons and emoji. Research is still demanded in the field to explore the significance and reliability of emojis.

In FtF communication one can easily convey the intended meaning using both verbal and non-verbal cues. Contrary to FtF communication, CMC is written-based and lacks non-verbal cues, therefore, emoticons were incorporated to enable the receiver to understand the feeling or mood of the sender (Wei, A. C. Y.,2012 as cited in Jibril & Abdullah, 2013). Shigetaka Kurita (1990s) incorporated emoji initially in Japan that enabled the receiver to understand the intention and purpose of the sender. With the newer research more interesting facts and features are making their way ahead. A similar attempt is made in the present study. The study aims to explore how far the feelings, mood, intention, and purpose of the sender can be perceived through emoji he or she has sent.

2.1. Emoticons and Emoji

An emoticon, is a shorthand or graphic representation of a facial expression allowing the user to express feelings or emotions and initiate a written message with non-verbal factors (:-) :- (:- /). Emojis, on the other hand, are a step further. These are graphic symbols, that portray not only facial expressions but also concepts and ideas. They can represent celebration, weather, food and drink also emotions, feelings, and activities (Zareen, Karim, & Khan, 2016). Emoji are a pictorial representation of human expressions and activities (🤩 😊 😌 😄 😍 😞). These help the communicators to mark their presence even via CMC.

Chandler, 2007 studied the models of signs and relativity quotes (Peirce, 1931) and what he calls icons. He defines an icon as a signifier resembling the signified and being similar in its qualities. As per the Peircean Model icons resemble objects and excite analogous sensations in the mind. Keeping in view the definition of an icon, the emoji fits well to be called an icon. As the icons excite the sensation of the referred object in the mind, the emoji excite the sensation of the gestures in the mind. To make a point here, the use of emoji in CMC is not mere random play with the faces; it stimulates the sensation of the referred gesture.

Through the revision of the previous works on the intentions of use of emoji as the surrogates of nonverbal cues in CMC Hu, Guo, Sun, Nguyen, & Luo, (2017) summarized seven main intentions behind the use i.e. Expressing sentiment, Strengthening expression, Adjusting tone, Expressing humor, Expressing irony, Expressing intimacy and Describing content. They discovered the most popular ones are expressing sentiment, strengthening expression, and adjusting tone. The use and purpose may vary from person to person. The differences in use can also be found across the age groups. The research intends to explore the differences objectively and open the ways for further research among different groups using emojis.

Seeing the popularity of emoji and extensive use throughout the world Oxford dictionaries selected the emoji 'Face with tears of joy' as word of the year in 2015 to recognize and acknowledge emoji ("Oxford names 'emoji' 2015 Word of the Year," 2015). The importance of emoji and the fact that they have made their place in the language is now visible.

The wide and variant use of emoji over different platforms leads to communication errors because of different graphic expressions. Miller et al., (2016) explored the problem systematically. They investigated whether emoji differences across platforms lead to different interpretations. From both sentiment and semantics perspectives, they found variance in the interpretation. When participants agreed on the same emoji misinterpretation, they disagreed on whether it was positive, negative, or neutral 25% of the time. Across platforms, the disagreements even elevated. Overall, the substantial potential for miscommunication was observed.

2.2. Context

In the global analysis of emoji (Linguistics, 2016), the per-country analysis shows significant variation in emoji use across different countries. The study suggests that the emoji use differs with the living conditions of the users. The present study is done in the context of Pakistan which falls in the third world cluster in the global analysis study. As per the analysis, the dominantly used emojis in Pakistan are unhappy faces and other sad emojis. The study does not focus on the popularity of emoji in context rather the analysis limits the scope of the current study to the context of research.

2.3. Emoji Use and Age

Sternbergh, (2014) claimed that today a random person, especially one under 30, will not tell you what a tilde is but he is very likely to comprehend, Face with Tears of Joy. Further acknowledging the popularity and wide use of emoji in today's communication, he calls emoji a new vocabulary. He extends his point of view and says that now when we are more connected than ever, we need to know that our connections are not being misunderstood. For better use of emoji, we definitely need to find how different people interpret emoji.

There are quite significant variations in the preferences of young and old. Especially, in internet use and communication means, there are found different preferences and adaptability across age groups. According to Thayer & Ray, (2006):

Young adults may also feel more comfortable communicating and building relationships online than middle and late adults because they are growing up in a technological era. Online communication is encouraged in schools and is being integrated into the lives of young adults both in personal and professional settings. Individuals in the middle and late age group may be relatively less adaptive to the changes in communication and relationship building the Internet brings.

Derks, Bos, & Grumbkow, (2007) studied the influence of social context in internet communication. The results showed a significant variation in the use of emoticons with variation in a social context. More emoticons were used in the socio-emotional context than task-oriented social context. With age, the context of communication changes. As discussed above, with the passing age people tend to be less expressive. People turn to be more task-oriented when using CMC. There is variation in use of emoticons in various social contexts and contexts tend to vary

for various age groups; hence there is an objective guess by the researcher that there is variation in the use of emoji across various age groups.

Age is a very significant factor studied to cause linguistic variation in stylistics. Stylisticians can find out the age of the writer from the discourse. Tagliamonte, (2008) have conducted their study of linguistic variation with age. This suggests that there are patterns of language use and age. Backing the hypothesis, as the language use vary, the emoji use would vary too.

As age increases, so does maturity and sensibility. Over age, with experiences of life one gets sensitive and critical to minor things. A mature person is more aware and sure of one's feelings than a juvenile. It is also widely seen that older people are inexpressive comparatively to younger ones. When it is true for FtF communication, it is truer for CMC. The use of emoticons and emoji to express feelings in CMC is more deliberate and intentional than the use of facial expressions in FtF communication. As discussed in Walther & D'Addario, (2001):

Relative to FtF non-verbal communication, emoticons may be considered more deliberate and voluntary. One may unconsciously smile FtF, but it is hard to imagine someone typing a :-) with less awareness than of the words he or she is selecting.

Taking into consideration the above-mentioned argument, it is inferred that there would be significant differences in the use of emoji by adults and juveniles. Hence, the current study intends to find the differences among three different age groups in terms of preferences and purposes of use.

2.4. Research on Emoji

There is much research and work done on emoticons and emoji. The emoji are studied from various aspects; the frequency at which they appear, the context of use, the interpretation and misinterpretation, the impact, the effect, and the importance of the emoticons and emoji (Unicode Emoji, n.d.). Some studies mark emoticons as alternate in CMC to gestures in FtF communication while others refer to those as punctuation marks in CMC.

As per the studies, (Miller et al., 2016), the interpretations and sentiments of emoji may vary from people to people. The difference in the use of emoji reveals the differences among the people. This leads the researcher to study and discover what variations can be found among people for the use of emoji.

As emoji are a newer introduction in the field of CMC and impacting language use at quite a significant rate. The research in the field has started and gained acceleration.

3. Methodology

As discussed, the aim of this paper was to examine the preferences and purposes of Emoji usage by different aged people. In order to achieve this aim and provide a comprehensive and clear understanding of the preferences and purpose of the use, the following research questions have been formulated:

RQ1: How far Emoji are preferred in CMC by people of different ages?

RQ2: Which emotions are expressed through emoji by different age groups?

RQ3: What is the purpose of using Emoji in CMC by people of different ages?

The main purpose of this study was to gain a general understanding of Emoji usage. Hence, the quantitative approach was most appropriate because it assigns variables (frequency of use and purpose) to a logical scale of values defined in numbers thus, providing a general understanding of the phenomenon (Dörnyei, 2003). The other reason for adopting the quantitative approach was because of its scientific rigor and clarity (Murray & Beglar, 2009).

3.1. Sample

The sample was chosen from the colleges and universities from Hyderabad, Sindh in 2017. The technique of quota sampling was used in which the researcher defined distinct subgroups and determined the proportion of the population that belonged to each of the subgroups (Dörnyei, 2003). Three sets of different age groups were made. From the total of 123 participants, there were 40 participants of age group one (10-20yrs), 44 participants of age group two (21-25yrs), 39 participants of age group three (26-40yrs).

3.2. Research Instrument

A survey questionnaire on the use of Emoji was used to collect data from the participants in order to obtain objective and accurate information (Creswell, 2012). The questionnaire was adopted (Derks et al., 2007; Derks, Bos, & von Grumbkow, 2008; Thayer & Ray, 2006; Walther & D'Addario, 2001) to fit the context well.

The questionnaire was piloted in order to determine the accuracy of the instruments to be used for the main study. Certain changes were made after the piloting. The final version of the questionnaire had 4 items related to CMC and emoji use in general, 20 items on the use of various emoji, and 7 items on the purpose of emoji use. The frequency of using CMC and various emojis was measured on the likert scale of 6; 1 being 'Never' and 6 being 'Always'. However, the purpose of using emoji was measured on the likert scale of 4; 1 being 'Strongly Disagree' and 4 being 'Strongly agree'.

3.3. Data Collection

The data was collected from the colleges and universities of Hyderabad, Sindh, Pakistan. Before starting the data collection process for the pilot and the main study, all the participants were informed about the nature and purpose of the research. It was made clear that their participation was completely voluntary and they were free to leave any time they wanted. Participants were also assured of the confidentiality of the data. The participants were set free in their natural mood and were not stimulated by any kind to trigger their responses. Finally, all participants were given detailed information on the front paper of the questionnaire and at the end were asked to sign the informed consent form especially designed for the study to confirm their participation.

3.4. Data Analysis

The data were analyzed through descriptive analysis to describe the characteristics of the sample (Pallant, 2011).

In order to address RQ 1, the frequency of the responses was checked to determine the preferences of different age groups. For RQ2, the comparison of groups was made through the mean and median of the total responses. However, to address RQ3, again the comparison of groups was made as per frequencies of the responses.

4. Data Analysis and Findings

4.1. Preferences of Different Age Groups for use of CMC and Emoji

Firstly, all respondents' preferences for use of CMC and emoji were measured. To do so, the number and percent of all participants' (n=123) use of CMC, CMC for socio-emotional, CMC for getting the task done, and Emoji was calculated in order to answer RQ1. Table 1 summarizes the results of the analysis with respect to each question (Q1 to Q4) for each age group. The frequency of use was determined on a Likert type six-point scale from 1 'Never' to 6 'Always'.

TABLE I. Frequency of Participants' Use

Question	Age	Never	Rarely	Sometimes	Often	Frequently	Always
Q1 CMC (%)	10-20	0 (0)	2 (5.0)	5 (12.5)	12 (30.0)	9 (2.5)	12 (30.0)

	21-25	4 (9.1)	2 (4.5)	5 (11.4)	3 (6.8)	13 (29.5)	17 (38.1)
	26-40	1 (2.9)	2 (5.7)	9 (25.7)	7 (20.0)	10 (28.6)	6 (7.1)
Q2 CMC for Socio-emotional purposes (%)	10-20	5 (12.5)	2 (5.0)	12 (30.0)	11 (27.5)	7 (17.5)	3 (7.5)
	21-25	3 (6.8)	2 (4.5)	13 (29.5)	10 (22.7)	11 (25.0)	3 (6.8)
	26-40	4 (11.4)	6 (17.1)	8 (22.9)	10 (28.6)	6 (17.1)	1 (2.9)
Q3 CMC for getting task done (%)	10-20	0 (0)	4 (10.0)	11 (27.5)	11 (27.5)	6 (15.0)	8 (20.0)
	21-25	2 (4.5)	3 (6.8)	5 (11.4)	12 (27.3)	11 (25.0)	10 (22.7)
	26-40	1 (2.9)	5 (14.3)	5 (14.3)	9 (25.7)	8 (22.9)	7 (20.0)
Q4 Emoji (%)	10-20	0 (0)	2 (5.0)	10 (25.0)	4 (10.0)	7 (17.5)	17 (42.5)
	21-25	2 (4.5)	1 (2.3)	6 (13.6)	9 (20.5)	15 (34.1)	10 (22.7)
	26-40	4 (11.4)	9 (25.7)	10 (28.6)	5 (14.3)	5 (14.3)	2 (5.7)

Table 1 demonstrates that the age group one and two use CMC 'Always' while age group three use CMC 'Frequently'. Therefore, age group three uses CMC less compared to the age group one and two.

The results show that the age group one and two use CMC 'Sometimes' for socio-emotional purposes and 'Often' for getting tasks done whereas age group three use CMC 'Often' for both socio-emotional purposes and getting the task done. It can be seen that the CMC use of the age group one and two is more task-oriented than socio-emotional. However, age group three use CMC equally for both socio-emotional purposes and getting task done and the use is consistent.

For the use of emoji, the results show that the age group one use emoji 'Always', age group two use emoji 'Frequently' whereas age group three use emoji 'Sometimes' or 'Rarely'. Age group one use emoji more than the other two groups and age group three use emoji the least of all three groups. Hence, there is a gradual decline in emoji use with age.

4.2. Comparison of Different Age Groups for the Emotion Expression through Emoji

The purpose of Research Question Two (RQ2) was to compare the age groups for the expression of emotion through emoji in CMC. In order to address this research question, first of all, the responses for each category of emoji (Happy, Funny, Angry, and Sad) were summed up. The Q5 to Q9 referred to Happy emoji, Q10 to Q14 referred to Funny emoji, Q15 to Q19 referred to Angry emoji whereas Q20 to Q24 referred to sad Emoji. Then the descriptive statistics were carried out to determine the frequency of emotions expressed by different groups in emoji use.

Table 2 shows the frequency of emotions expressed by different age groups using their responses to Q5 to Q24 in the questionnaire on a Likert-type six-point scale; from 1 'Never' to 6 'Always'. The results are summarized in Table 2.

TABLE II. Comparison of Age Group’s Use of different Emotion through Emoji

Emotion	Age	Mean (M)	Median (MD)
Happy (Q5-Q9)	10-20	17.43	18.00
	21-25	17.64	17.50
	26-40	13.14	11.00
Funny (Q10-Q14)	10-20	18.93	19.50
	21-25	19.66	21.00
	26-40	12.40	12.00
Angry (Q15-Q19)	10-20	14.45	14.00
	21-25	14.30	13.00
	26-40	11.11	10.00
Sad (Q20-Q24)	10-20	14.65	13.50
	21-25	15.02	14.00
	26-40	11.54	11.00

Table 2 compares the emotions expressed by the different age groups while using emoji. It can be clearly seen from the above results that there is a slight difference between age group one and age group two. However, there is a significant difference between age group two and age group three.

Age group one and two tend to use happy (MD=18.00 and 17.50) and funny (MD=19.50 and 21.00) emotions more comparative to angry (MD=14.00 and 13.00) and sad (MD=13.50 and 14.00) emotions. Whereas, the age group three expresses all the given emotions equally i.e. happy (MD=11.00), funny (MD=12.00), angry (MD=10.00), and sad (MD=11.00). Hence, age groups one and two express happiness and humor more than anger and sadness through emoji in CMC whereas age group three remains nearly consistent for the expression of all emotions.

4.3. Purpose of Using Emoji for Different Age Groups

In order to address Research Question three (RQ3), participants’ responses to Q25 to Q31 were examined. These questions determined the purpose of using emoji. To analyze, the number and percentage of all participants’ (n=123) responses were calculated. Table 3 summarizes the results of the analysis with respect to each question for each age group. The frequency of the purpose of the use was determined on a Likert type six-point scale from 1 ‘Strongly Disagree’ to 4 ‘Strongly Agree’.

TABLE III. Comparison of Age Groups’ Purpose of Emoji Use

Q	AGE	Strongly Disagree	Disagree	Agree	Strongly Agree
Q25 Express Sentiment (%)	10-20	1 (2.5)	5 (12.5)	14 (35.0)	19 (47.5)
	21-25	0 (0)	5 (11.4)	17 (38.6)	21 (47.7)
	26-40	1 (2.9)	8 (22.9)	14 (40.0)	12 (34.3)
Q26 Strengthen Expression (%)	10-20	2 (5.0)	9 (22.5)	15 (37.5)	12 (30.0)
	21-25	0 (0)	4 (9.1)	14 (31.8)	24 (54.5)

	26-40	1 (2.9)	9 (25.7)	17 (48.6)	8 (22.9)
Q27 Adjust Tone (%)	10-20	3 (7.5)	4 (10.0)	21 (52.5)	10 (25.0)
	21-25	1 (2.3)	9 (20.5)	18 (40.9)	13 (29.5)
	26-40	3 (8.6)	12 (34.3)	14 (40.0)	4 (11.4)
Q28 Express Humor (%)	10-20	3 (7.5)	6 (15.0)	15 (37.5)	15 (37.5)
	21-25	3 (6.8)	4 (9.1)	20 (45.5)	15 (34.1)
	26-40	2 (5.7)	10 (28.6)	16 (45.7)	7 (20.2)
Q29 Express Irony (%)	10-20	2 (5.0)	12 (30.0)	19 (47.5)	5 (12.5)
	21-25	5 (11.4)	10 (22.7)	16 (36.4)	11 (25.0)
	26-40	5 (14.3)	16 (45.7)	11 (31.4)	2 (5.7)
Q30 Express Intimacy (%)	10-20	6 (15.0)	15 (37.5)	14 (35.0)	3 (7.5)
	21-25	4 (9.1)	14 (31.8)	13 (29.5)	11 (25.0)
	26-40	3 (8.6)	13 (37.1)	14 (40.0)	5 (14.3)
Q31 Describe Content (%)	10-20	4 (10.0)	11 (27.5)	7 (17.5)	17 (42.5)
	21-25	3 (6.8)	14 (31.8)	14 (31.8)	11 (25.0)
	26-40	3 (8.6)	9 (25.7)	20 (57.1)	3 (8.6)

Table 3 demonstrates the results for the purposes of using emoji for three different age groups. The results for all the age groups are fairly uniform and all agree to use emoji for the given purposes. While there is a deviation in results for using emoji to express Irony and Intimacy. Age groups one and two significantly agree for the use of emoji to express Irony but age group three disagrees. Whereas for the use of emoji to express Intimacy, group three agrees, and groups one and two disagree.

The results show that the most common purpose to use emoji is to express Sentiment. Age group one (82.5%), two (86.3%), and three (74.3%) either strongly agree or agree for the use to express Sentiment. While the least common purpose is to express Intimacy. Age group one (52.5%), two (40.9%), and three (45.7%) either strongly disagree or disagree for the use to express Intimacy.

4.4. Discussion

This study found that age group three uses CMC lesser than age group one and two. The study also finds that age group three has yet not adapted to the use of emoji. These findings support (Thayer & Ray, 2006) who found that young adults are more comfortable communicating online than middle and late adults because they are growing up in a technological era.

Furthermore, the study shows that age groups one and two tend to use happy and funny emotions more while age group three remains consistent for all emotions. This suggests that age group three is conscious in terms of expressing their emotions in CMC.

The current study suggests that the most common purpose to use emoji is to express Sentiment in the current study context. The results partly confirm the study of Hu, Guo, Sun, Nguyen, & Luo (2017) who discovered the most popular ones are Expressing Sentiment, Strengthening Expression, and Adjusting Tone.

Overall, the study found that age groups one and two have similar habits of using CMC and emoji but age group three shows significant variation. This may be because there is generation as well as the professional difference among the groups.

5. Conclusion

This paper was an attempt to explore the differences among CMC users of different age groups from colleges and universities in Hyderabad, Sindh, Pakistan. It compared three different age

groups regarding their use of emoji. The findings suggest that the age group one always use emoji mainly happy and funny ones. The age group two frequently use emoji and they also use happy and funny emoji more. While the age group three use emoji either sometimes or rarely. They use all emotions i.e. happy, funny, angry, and sad almost equally. The purposes of using emoji for all the three groups are similar i.e. Expressing sentiment, Strengthening expression, Adjusting tone, Expressing humor, Expressing irony, Expressing intimacy, and Describing content. The research findings are limited to in their scope, design, and analysis.

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