

The impact of emotion-laden texts on reading comprehension and perceptual proficiency: the case of Saudi Female Learners of English

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Abstract

The relationship between emotion and language may have an impact on reading comprehension of foreign language learners. Emotion-laden texts can affect L2 reading comprehension. This research tests the hypothesis that L2 reading comprehension are influenced by the emotive language that learners are exposed to. One hundred thirty-seven Saudi female L2 learners of English are presented with emotive texts. In Study 1, they are asked to read positive emotive-laden

and neutral texts and in Study 2, negative emotive-laden and neutral texts. It is hypothesized that participants' L2 reading comprehension are influenced by learners' perception of positive and negative emotive-laden texts. The results show that both positive emotive-laden text and negative emotive-laden text influenced participants' L2 comprehension. However, the positive emotive-laden text had a higher reading comprehension score than the negative and the positive emotive-laden text had a high size effect. In addition, statistically significant positive correlation was found between reading comprehension and self-reported reading proficiency. However, the correlation coefficient for positive emotive-laden text was higher than the negative text. There were group differences between positive emotive-laden text and negative emotive-laden text in perceived feelings after reading in favor of positive emotive-laden text. This paper contributes to the debate between the role of emotions in reading comprehension of Arabic speakers and learners of English as a foreign language. We consider the impact of emotive language for language learning.

Keywords: Emotion-laden texts, reading comprehension, English as a foreign language, reading proficiency

Introduction

Foreign language acquisition has great emphasis on the role of cognition in language learning, be it aptitude, working memory, and teaching pedagogies. However, recently, research now focuses on the role of emotions in language learning, and their unpredictable effects (Dewaele, Chen, Padilla, and lake, 2019). Emotional development includes understanding of emotions and their meaning, emotional status, and the appropriate emotional expressions and how to regulate emotions (Trommsdorff, 2006). People who are emotionally and socially intelligent can understand and express themselves, know how to communicate well with others, and can successfully cope with the demands of daily life (Bar-On, 2005).

Cognition and emotions are interactive and integrated in the brain (Phelps, 2006, Pessoa, 2008). Emotions play an important role in all mental processes (Izard, 2009). And because emotions can be a driver that generates ideas and thoughts, it also might play an important role in modulating thinking (Minner, 2019). Positive emotions such as happiness and pleasure, joy, have positive psychological effect on people's cognition, which in turn might lead to an increase in their learning a foreign language (Dewaele et al, 2019). Similarly, negative emotions, such as sadness, anger, hopelessness, can lead to increased attention, but learners might feel a degree of distress. This article investigates the effect of emotion-laden texts on second language reading comprehension and English proficiency levels (see Tyng, Amin, Saad, & Malik, 2017). Language and emotions vary across cultures, not only from language to another but also from regional and social variety (Wierzbicka, 1999).

Literature Review

Emotion

The issue of defining the emotion has been under discussion since Aristotle (Lakoff 2016; Mulligan and Scherer 2012; Pavlenko 2008). Emotions have been considered as discrete, automatic, functional responses to the environment associated with some physiological and behavioral reactions (Ekman 1972, 1992). Emotions were also considered non-specific constructions of the mind based on valence and arousal that shape in the course of socialization

(Barrett 2006; Russell 2003). Keltner and Shiota defined emotion (2003: 89) with its focus on different channels simultaneously: “[a]n emotion is a universal, functional reaction to an external stimulus event, temporally integrating physiological, cognitive, phenomenological, and behavioral channels to facilitate a fitness-enhancing, environment-shaping response to the current situation”.

Emotion Research in SLA Literature

Initially, the emotion research focused on anxiety and then moved to other aspects. The development of emotion research may be discussed in three broad phases based on the major types of emotions studied in each phase. The first phase ranged from the early 1960s to the mid-1980s may be termed as Emotion Avoidance Phase. During this phase the existence of emotions was not necessarily denied, but it was considered as an irrational factor in language learning at a time when there was a clear preference for ‘scientific’ cognitive factors (Prior, 2019). The second phase ranged from the mid-1980s to the early 2010s and was called the Anxiety-Prevailing Phase. During this phase there was growing acceptance that emotion and cognition are linked and that emotion plays a fundamental role in language learning, but with a main focus on the single negative emotion of anxiety endured (MacIntyre 2017). The third phase emerged in the early 2010s and is called the Positive and Negative Emotions Phase when researchers became increasingly interested in the psychology of language learning. This phase is marked with Positive Psychology (MacIntyre 2016) in which learner (and teacher) emotions have been seen as the fuel of learning and teaching.

Emotions and Language Learning

Research has been carried out on the role of emotions in seeking knowledge, yet it is a recent phenomenon in language education. Previously the primary concern was the study of a single emotion, i.e., anxiety in language learning process (Dewaele & MacIntyre, 2014; Gregersen, MacIntyre, & Meza, 2014; Mercer, 2006), but there has been a shift to various socio-cognitive variables and antecedents in the development of target language proficiency (Pavlenko, 2013). Arguing about the relevance of emotions in school setting, Pekrun (2014) groups emotions into four categories. The first category is achievement emotions and it relates to feelings connected to success and failure. The category of epistemic emotions relates to cognitive problems

encountered while learning. The category of topic emotions relates to the specific topics that students deal with in the lessons and the fourth category of social emotions relates to teachers and peers in the classroom. The most studied category is achievement emotions. According to Pekrun, Frenzel, Goetz and Perry (2007) there are three dimensions of achievement emotions; valence (positive vs. negative quality), activation (activating vs. deactivating tendency), and the activity (intrinsic emotion) or the outcome (extrinsic emotion). Pekrun, Goetz and Perry (2005) developed the Academic Emotions Questionnaire to measure the achievement emotions in the classroom. This instrument has been used in several quantitative studies (e.g., Frenzel, Thrash, Pekrun, & Goetz, 2007; Pekrun, Elliot, & Maier, 2009; Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011).

Another interesting aspect in the study and role of emotions is the ongoing interest in learner identity with which emotions are closely linked. This movement was led largely by the work of Norton (2000) and has since been followed by numerous other studies interested in the role of language in identity construction. Notable studies include those of Norton (2000) and Menard-Warwick (2009) with their focus on immigrant language learners. Miller (2011) worked on the social construction of identity in qualitative interviews and his work bears relevance to the methodological choices made in the current study.

Emotions and Reading Comprehension

Emotions play a pivotal role in capturing readers' attention and interest in narrative texts. Narratives are the first step for children towards learning to learn and learning to read. At the same time, emotions start developing sufficient social-cognitive abilities such as perspective taking and understand the mental worlds of others (Diergarten & Nieding, 2015). Socio-cognitive abilities continue to mature throughout childhood and into adolescence (Burnett, Sebastian, Cohen Kadosh, & Blakemore, 2011). There were little evidences about narrative comprehension and the role of social-cognitive abilities in childhood, but recent studies suggested that reading of narratives may contribute to the development of socio-cognitive abilities (Kidd & Castano, 2013). In the cognitive models of text comprehension (Kintsch & van Dijk, 1978) readers construct a coherent mental representation or situation model of the state of affairs described in a text by combining information from the text with relevant background knowledge. These models are multidimensional and involve different aspects of stories like setting, events, action, several story

aspects, such as story setting, events, actions, and protagonist's goals, motives, and emotions (Zwaan & Radvansky, 1998).

Several lines of research suggest that negative emotions are of particular interest. First, in the (neuro) cognitive literature on performance monitoring and cognitive control most studies focus on negative events such as errors and conflicts and their consequences because unfavorable outcomes are typically more consequential for regulation of behavior than favorable outcomes (Ridderinkhof, Ullsperger, Crone, & Nieuwenhuis, 2004). Second, narratives usually revolve around a problem that has to be resolved. Stories may serve as opportunities for the mind to simulate ways to resolve problems one might encounter without having to experience actual negative consequences.

Emotion recognition ability – individual differences

Emotion perception according to Barrett (2017) is defined as the ability of individuals to infer the emotional states of others based on their previous emotional experiences and predictions that are constructed by emotion concepts available in their languages through certain emotional channels either verbal, non-verbal cues or a combination of both. Emotion concepts acquired through learning a language are essentially associated with emotions words and expressions (Barrett, 2017) which might not exist in other languages (Pavlenko, 2008). Accordingly, individuals speaking more than one language are more likely to possess a greater number of emotion concepts across their languages. This is considered an indicator of well-being and emotional intelligence (Barrett, 2017).

This study adopts the perspective that emotional intelligence is a personality trait (Petrides & Furnham, 2003). Emotional intelligence can be measured through self-report questionnaires such as the Trait Emotional Intelligence Questionnaire (Petrides & Furnham, 2003). Scores of the questionnaires may lead to predictions about emotional knowledge and personality. Several studies thus far have linked emotional intelligence with emotion recognition ability (Austin, 2004; Ciarrochi, Chan, & Bajgar, 2001; Dewaele, Lorette, & Petrides, 2010; Petrides & Furnham, 2003). Overall, most of these studies have found that participants with high trait emotional intelligence levels were better at recognizing emotions. In Dewaele et al. (2010), trait emotional

intelligence had a positive effect on the emotion recognition ability of British and Americans English L1 learners.

This study will address the following questions:

1-Are there any differences in L2 reading comprehension for positive emotions text and a passage with neutral emotions?

2-Are there any differences in L2 reading comprehension for negative emotions text and a passage with neutral emotions?

3-What is the relationship between learners` self-reported level of language proficiency in English and L2 reading comprehension?

4-What is the relationship between learners` reading comprehension scores of general texts and L2 reading comprehension of emotion-laden texts?

5-Do emotion-laden texts affect the learners` feelings after reading?

Study 1

Participants

Sixty -five IT computer female university engineering students whose ages ranged from (18-20) years with $M= 18.954$, $SD = 0.717$, responded to a questionnaire pertaining to Study 1, see Appendix A and B. The participants were enrolled in an intensive English language course. All participants speak Arabic as their native language, and they are all Saudi national. The authors adhered to ethical standards by taking the approval to conduct the research from the ethics committee at Taif University.

Materials and Procedure

Emotion-denoting words were selected from the *NRC Word-Emotion Association Lexicon* (Saif, 2018). These selected words denote positive emotions have the rating of 8 points and above and they are as follows; *Happy, beautiful, smiling, cheerful, joy, Keep smiling, laughter, love, hilarious, amazing, laughter, wonderful, best, cool, excited, celebrate, up, pleasure* (Saif, 2018). The questionnaire contained reading comprehension of “ice-cream” that contains positive words (e.g. *amazing, wonderful, best, cool, excited, beautiful, healthy, rich, fantastic, delicious*). The first group was exposed to reading a reading passage that includes (15) positive emotive words, then the students answer (10) multiple-choice questions that measure their reading comprehension of neutral emotive words. Following that, we assess their level in L2 reading proficiency, then they self-report their language proficiency level on a 5-point scale ranging from “beginner” (1) to “advanced” (5), and they report their feelings on a 3-point scale ranging from “sad” (1) to “happy” (3). In addition, participants read a passage that does not contain any positive emotive words. The learners in this condition were exposed to reading 2 reading passages that include positive emotive texts and neutral tests.

Validity and reliability of the research tools

The positive emotive-laden reading passages and the questions were presented to 3 experts in applied linguistics to assess the readability, comprehensibility and appropriateness of the texts and questions. All the procedures confirm the validity of the materials.

The reliability of each test was conducted for the positive emotive reading passage and the same passage with neutral words. As the test had 10 multiple-choice questions, the Kuder-Richardson Equation was used to suit the nature of the achievement test of reading passages (Sarmah and Bora Hazarika, 2012). The test was conducted on ten reading questions of the positive emotive test as well as ten questions pertaining to the neutral emotive text. The reliability coefficient scores for both positive emotive text and neutral emotive text are almost equal to 0.7 which is considered a reliable score.

Results

The reading comprehension that included neutral emotive words scores were computed based on the passage's mean ($M = 3.908$, $SD = 1.765$). The t-test was used to determine if the participants correctly answered the MCQs in the reading passage and whether their scores were affected by the emotions contained in the text. The value of $t(64) = 7.822$, $p = 0.000$ shows that the reading comprehension difference between a passage that includes positive emotions and one that does not include positive emotion is statistically significant. This confirms the significant effect that reading emotive texts had on people's understanding of those texts in a second language. Also, the selective positive emotive-laden words may contribute to increasing the comprehensibility level of the L2 students. The effect size η^2 is 0.145, which is a significant effect coefficient that shows that the positive emotive-laden text has a significant effect on the reading comprehension scores.

Pearson correlation coefficient was used to assess the relationship between the level of reading proficiency and the estimated feelings in the negative emotive-laden as well as the relationship between learners' self-reported L2 reading proficiency and their reading comprehension in table (2) below.

Table (1). Pearson correlation coefficient and the relationship between the level of reading comprehension and the learners' feelings for positive emotive-laden text

Reading passages		Self - rating of Emotions	Level of language proficiency
Reading comprehension of positive emotive-laden text	Pearson Correlation	0.497	0.395
	Sig. (2-tailed)	0.000	0.001
	N	65	65
	$\eta^2=R^2$	0.247	0.156
Reading comprehension of neutral text	Pearson Correlation	0.484	0.336
	Sig. (2-tailed)	0.000	0.006
	N	65	65
	$\eta^2=R^2$	0.234	0.112

Table 1 shows that there is a positive statistically significant correlation between learners' scores of L2 reading comprehension and their L2 self-reported reading proficiency. This result is expected given that learners' are undergraduate students and they can predict with high accuracy their L2 reading comprehension. Their estimation of their language level has matched their performance and this indicates that they have performance monitoring capabilities. Also, it is also clear from the table that there is a positive statistically significant correlation between the scores of reading comprehension and self-reported reading proficiency level of their emotions after reading. The effect size is considerably big ($\eta^2 = 0.156$) which indicated that 15.6% of the common variance between the reading comprehension of the reading text that contains positive motive-laden text and the self-reported level of reading proficiency ($r(65) = 0.395$, $P = 0.001$, $R^2 = 0.156$).

And also the findings show the effect size is large $\eta = 0.247$ that means 24.7% of the common variance between the reading comprehension of a reading text that includes positive emotive-laden words and the emotions associated with reading a text that includes negative emotive-laden words ($r(65) = 0.497$, $P = 0.000$, $R^2 = 0.247$).

In addition, the effect size is large $\eta = 0.234$ that means 23.4% of the common variance between the reading comprehension of a reading text that does not include positive vocabulary and the emotions associated with reading text that does not include negative vocabulary ($r(65) = 0.484$, $P = 0.000$, $R^2 = 0.234$). The effect size is average $\eta = 0.112$ that means 11.2% of the common variance between the reading comprehension of the positive emotive-laden text words and their level of self-reported reading proficiency ($r(65) = 0.336$, $P = 0.006$, $R^2 = 0.112$).

Study 2

Participants

Seventy-two engineering and pharmacy female students, whose ages ranged from (18-20) years with $M = 18.861$, $SD = 0.678$, completed the online questionnaire in the second study, see Appendix C and D. The students were enrolled in an intensive English course. All participants are Saudi Arabic native speakers. The authors abided by ethical standards by taking the approval to conduct the research from the ethics committee at Taif University.

Materials and Procedure

Emotion-denoting words were selected from the **NRC Word-Emotion Association Lexicon** (Saif, 2018). These selected words denote negative emotions have the rating of 8 points and above and they are as follows; *sad, devastated, sullen, down, crying, dejected, heartbroken, grief, weeping, faking a smile, What a grim night, sadly, grieve, mourn the loss, super sad, depressing, suffering, dreadful, unhappy, gloomy, hurt* (Saif, 2018). The questionnaire contained reading comprehension of “ice-cream” that contains positive words (e.g. *sadly, grieve, mourn the loss, super sad, depressing, suffering, dreadful, unhappy*). The first group was exposed to reading a reading passage that includes (15) negative emotive words, then the students answer (10) multiple-

choice questions that measure their reading comprehension of neutral emotive words. Following that, we assess their level in L2 reading proficiency, then they self-report their language proficiency level on a 5-point scale ranging from “beginner” (1) to “advanced” (5), and they report their feelings on a 3-point scale ranging from “sad” (1) to “happy” (3). In addition, participants read a passage that does not contain any negative emotive words. The learners in this condition were exposed to reading 2 reading passages that include negative emotive-laden texts and neutral tests.

Validity and reliability of the research tools

Three applied linguistics specialists evaluated the readability, comprehensibility, and appropriateness of the negative emotive-laden reading passages and questions. Each method verifies the materials' validity.

Similar to Study 1, the Kuder-Richardson Equation was performed on both negative emotive text and neutral emotive text with each containing 10 multiple-choice reading comprehension questions. The reliability coefficient scores for both negative emotive text and neutral emotive text are higher than 0.7. This confirms the high reliability of both comprehension tests in this study.

Results

We computed the mean and standard deviation of neural emotive words, and it was $M = 5.917$, $SD = 0.835$. Therefore, t-test was performed for one group to determine whether the participants' scores differed in negative emotive texts and a text with neutral emotion. The value of $t(71) = 7.021$, $p = 0.000$, which confirms that there are statistically significant differences in reading comprehension for a text that contains negative emotions and a text that does not include negative emotions in favor of reading a text that does not include negative emotions. This confirms that the negative emotive-laden text had a negative impact on the comprehensibility level of L2 learners. And since the effect size η^2 is equal to 0.137, which is a significant effect coefficient, as these results confirm that negative words affect the variation in reading comprehension scores by 13.7%. To investigate (a) the relationship between the level of reading comprehension and the estimated feelings in the negative emotive laden text and (b) the relationship between learners' self-reported

L2 reading proficiency and their reading comprehension, the correlation coefficients were calculated using the Pearson correlation coefficient, as shown in Table 3.

Table (2). Pearson correlation coefficient and the relationship between the level of reading comprehension and the learners' feelings for negative emotive-laden text

Reading passages		Self - rating of Emotions	Level of language proficiency
Reading comprehension of negative emotive-laden text	Pearson Correlation	0.259	0.360
	Sig. (2-tailed)	0.0027	0.001
	N	72	72
	$\eta^2=R^2$	0.067	0.130
Reading comprehension of neutral text	Pearson Correlation	0.487	0.351
	Sig. (2-tailed)	0.000	0.004
	N	72	72
	$\eta^2=R^2$	0.237	0.123

It is also clear from the table that the effect size is average $\eta = 0.067$ that means 6.7% of the common variance between reading comprehension and the emotions associated with the reading text that included negative emotive-laden words, ($r(72) = 0.259$, $P = 0.027$, $R^2 = 0.07$).

Also, it shows that the effect size is average $\eta = 0.13$ that means 13% of the common variance between the reading comprehension of the reading text that contains negative emotive-laden words and the assessment of the level of language proficiency, ($r(72) = 0.360$, $P = 0.001$, $R^2 = 0.13$).

Also, it shows that the effect size is big $\eta = 0.237$ that means 23.7% of the combined variance between the reading comprehension of a reading text that does not include negative emotive-laden words and the emotions associated with reading a text that does not include negative vocabulary, $r(72) = 0.487$, $P = 0.000$, $R^2 = 0.237$.

Also, the effect size is average $\eta = 0.123$ that means 12.3% of the common variance between the reading comprehension of the reading text containing negative emotive-laden words and the assessment of the level of language proficiency, $r(72) = 0.351$, $P = 0.004$, $R^2 = 0.123$.

Further Analyses

In this section, we address three research questions. We will start by answering research questions three and four together for better readability of the results. Then, we provide the finding for question 5.

To answer questions three and four, the correlation coefficients were calculated using the Pearson correlation coefficient between the level of reading comprehension and the estimate of feelings in the four situations of the two groups in question 3. Also, the correlation coefficients were also calculated using the Pearson correlation coefficient between the level of reading comprehension and the self-reported language proficiency level in question four, as shown in Table 3 below.

Table 3. The relationship between learners' self-reported level of language proficiency learners' self-rating emotions and reading comprehension for positive emotive-laden text

Reading passages		Self - rating of Emotions	Level of language proficiency
Reading comprehension of positive emotive-laden text	Pearson Correlation	0.497	0.395
	Sig. (2-tailed)	0.000	0.001
	N	65	65
	$\eta^2=R^2$	0.247	0.156
Reading comprehension of neutral text tested with positive emotive-laden text	Pearson Correlation	0.484	0.336
	Sig. (2-tailed)	0.000	0.006
	N	65	65
	$\eta^2=R^2$	0.234	0.112

The effect size of η^2 , small 0.01, 0.6 medium, 0.12 big

And also the findings show that the effect size is big $\eta = 0.247$ that means 24.7% of the common variance between the reading comprehension of a reading text that includes positive laden-text and the emotions associated with reading a text that includes negative laden-text , $r(65) = 0.497, P = 0.000, R^2 = 0.247$.

The effect size is large $\eta = 0.234$ that means 23.4% of the common variance between the reading comprehension of a reading neutral text pertaining to the positive emotive-laden text and the emotions associated with reading neutral text pertaining to the negative emotive-laden text, ($r(65) = 0.484, P = 0.000, R^2 = 0.234$).

And $r(65) = 0.484, P = 0.000, R^2 = 0.234$. the effect size is large $\eta = 0.234$ that means 23.4% of the common variance between the reading comprehension of a reading text that does not include

positive laden-text and the emotions associated with reading text that does not include negative laden-text.

Also, $r(65) = 0.336$, $P = 0.006$, $R^2 = 0.112$. The effect size is average $\eta = 0.112$ that means 11.2% of the common variance between the reading comprehension of the reading text that contains positive laden-text and the assessment of the level of language proficiency.

It is clear from Table 3 that there is a positive, statistically significant correlation between the scores of reading comprehension and the level of language proficiency reported by participants, and this might be due to the participants' awareness of estimating their language levels with good accuracy. In other words, participants have good performance monitoring capabilities.

It is also clear that there is a positive, statistically significant correlation between the scores of reading comprehension and the level of assessment of their emotions during reading.

However, the correlation coefficient of feelings with comprehension of a positive emotive-laden text is higher than the correlation coefficient of reading comprehension of a negative emotive-laden text. This is due to the learners' pay more attention to answering different questions with high accuracy than being negatively affected by the emotions associated with different texts.

Research has found that the highest percentage of readers have enjoyed reading to some extent, 39%. The lower correlation coefficient in the negative emotive-laden text might be because participants with poor reading skills always report estimated feelings as negative. This result is supported empirically in a study by Morgan, Farkas, and Wu (2012) who reported that children's low reading proficiency is associated with reported sentiments of anger, sadness, and anxiety which explains why they get low scores on feelings.

Question 5, Do emotive-laden texts affect the learners' perceived feelings towards reading? Do the scores of emotions differ between a group after reading a text that includes positive words and a group in the case of a text with a negative laden-text?

To answer this question, the t-test of two independent groups was used and the scores of the two groups were compared in estimating emotions. There are differences in estimating feelings between the group of female students after reading a text that includes positive emotive words and the group of female students after reading a text that includes negative emotive words in favor of

the group that read a text that includes vocabulary about positive emotions ($t(135) = 3.445$, $p = .001$). This confirms that the content that the learner reads affects their feelings, which makes that the positive content affects the feelings and motivation of learners. And since η^2 equals 0.08, which confirms that 8% of the variance between the two groups in feelings might be due to the valence of words selected in the texts.

Discussion

Our two studies found that emotive words influenced students' understanding. Both positive and negative words contributed to students' correctly answering the reading comprehension questions. In comparing between emotive and non-emotive words, we found that emotive words influenced L2 reading comprehension positively in favor of emotive-laden texts. These findings contrast research that argue that non-emotive words are "safe" for L2 learners and therefore learners are affected by the offensiveness or the valence of such word (see Dewaele, 2005, 2008). Also, our findings dispel research that argue that people react physiologically upon hearing emotive words and therefore that might be detrimental to their learning or understanding of emotive words (Caldwell-Harris, 2014). On the contrary, we found that students' indeed green flagged such words and to them they might be more pronounced and might have positive effect on their understanding and/or learning than non-emotive words.

We found that there is a positive relationship between scores of reading comprehension and participants' estimation of their L2 reading proficiency. This finding goes against Delawé (2016) where he argues that L2 learners were much less certain of the precise meaning of most emotive words comparing to L1 users. L2 participants are fully aware of the meaning of emotive-words and could easily guess the meaning of the comprehension questions.

When it comes to participants' emotions in the second language, research has found that we should consider individual differences even when they perform the same L2 task (Daley, Willett and Fischer., 2014). Yet, in this study, we found positive relationship between scores of reading comprehension and participants' estimation of their emotions.

The final research question focused on the differences between the two groups for positive and negative emotive laden texts in estimating emotions. The findings showed that there was a significant difference between the two groups in favor of a positive emotive laden text. This showed that participants' desirability towards positive emotions affect positively on their estimation of their feelings. Learners who have much of positive emotions in their everyday lives tend to be happier, healthier, learn better, and get along well with others. As positive emotion increase their awareness and make them see more options for solving problems (Um, Song, & Plass, 2007)

Conclusion

Foreign language learners' reading comprehension may be influenced by the link between emotion and language. Emotional texts can have an impact on reading comprehension in this way. This study investigates whether learners' L2 reading comprehension is influenced by the emotive language they are exposed to. Positive, negative, and neutral emotive-laden texts are offered to the participants. They are instructed to read positive, emotion-laden texts in Study 1 and negative, emotion-laden materials in Study 2. Participants' reading comprehension is thought to be influenced by their perceptions of positive and negative emotive-laden texts. The findings reveal that participants' reading comprehension was influenced by both positive and neutral emotion-laden texts. Participants' reading comprehension was also influenced by negative and neutral emotion-laden texts. In a similar vein, the findings reveal that both positive and negative emotion-laden texts influenced participants' reading comprehension. The study also discovered a link between reading comprehension, emotionally charged texts, and participants' self-reported reading proficiency. This article adds to the discussion over the function of emotions in reading comprehension among Arabic speakers and English language learners. We look at how emotive language affects language learning.

References

- Austin, E. J. (2004). An investigation of the relationship between trait emotional intelligence and emotional task performance. *Personality and Individual Differences*, 36 (1), 1855– 1864.
- Bar-on, R. (2005). The Bar-On model of Emotional–Social Intelligence (ESI). *Psicothema* 17.
- Barrett, L. F. (2006). Solving the Emotion Paradox: Categorization and the Experience of Emotion. *Personality and Social Psychology Review*, 10 (1), 20–46.
- Bradley, M.M. & Lang, P.J. (1999). Affective norms for english words (ANEW): Instruction manual and affective ratings. Technical Report C-1, The Center for Research in Psychophysiology, University of Florida.
- Burnett, S., Sebastian, C., Cohen Kadosh, K., & Blakemore, S.J. (2011). The social brain in adolescence: Evidence from functional magnetic resonance imaging and behavioural studies. *Neuroscience and Biobehavioral Reviews*, 35, 1654–1664. doi:10.1016/j.neubiorev.2010.10.011
- Caldwell-Harris, C. L. (2014). Emotionality Differences Between a Native and Foreign Language: Implications for Context-Dependence and Embodiment. Available at: <https://bu.academia.edu/CatherineCaldwellHarris/>
- Ciarrochi, J. V., Chan, A. Y. C., & Bajgar, J. (2001). Measuring emotional intelligence in adolescents. *Personality and Individual Differences*, 31,1105–1119.
- Daley, S. G., Willett, J. B, and Fischer.,K.W., (2014). Emotional Responses During Reading: Physiological Responses Predict Real-Time Reading Comprehension. *Journal of Educational Psychology*, 106, (1), 132–143
- Dewaele, J. M., & MacIntyre, P. D. (2014). The two faces of Janus? Anxiety and enjoyment in the foreign language classroom. *Studies in Second Language Learning and Teaching*, 4 (2), 237-274.
- Dewaele, J. M., Lorette, P., & Petrides, K. V. (2010). The effects of linguistic proficiency, trait emotional intelligence and cultural background on emotion recognition by British and American English L1 users. In L. Mackenzie & L. Alba-Juez (Eds.), *Emotion in Discourse*. Amsterdam: John Benjamins.

- Dewaele, J.-M., Chen, X., Padilla, A.M., & Lake, J. (2019). The flowering of positive psychology in foreign language teaching and acquisition research. *Frontiers in Psychology. Language Sciences* 10, 2128. Doi: 10.3389/fpsyg.2019.02128.
- Diergarten, A. K., & Nieding, G. (2015). Children's and adults' ability to build online emotional inferences during comprehension of audiovisual and auditory texts. *Journal of Cognition and Development*, 16, 381–406. doi:10.1080/15248372.2013.848871
- Ekman, P. (1972). Universals and cultural differences in facial expression of emotion. In James (ed.), *Nebraska Symposium on Motivation*, (Volume 19), 207-283. Lincoln: University of Nebraska Press.
- Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, 6, 169–200.
- Frenzel, A. C., Thrash, T. M., Pekrun, R., & Goetz, T. (2007). Achievement emotions in Germany and China: A cross-cultural validation of the academic emotions questionnaire-mathematics. *Journal of Cross-Cultural Psychology*, 38(3), 302-309.
- Gregersen, T., MacIntyre, P. D., & Meza, M. (2014). The motion of emotion. *Modern Language Journal*, 98 (2), 574-588. doi: 10.1111/modl.12084
- Izard, C.E., (2009). Emotion Theory and Research: Highlights, Unanswered Questions, and Emerging Issues. *Annu Rev Psychol.* 60, 1-25. doi: 10.1146/annurev.psych.60.110707.163539
- Keltner, D., Oatley, K., & Jenkins, J. M. (2014). *Understanding emotions* (3rd ed.). Hoboken, NJ: John Wiley and Sons.
- Keltner, D., & Shiota, M. N. (2003). New displays and new emotions: A commentary on Rozin and Cohen (2003). *Emotion*, 3, 86–91.
- Kidd, D. C., & Castano, E. (2013). Reading literary fiction improves theory of mind. *Science*, 342, 377–380. doi:10.1126/science.1239918
- Kintsch, W., & van Dijk, T. A. (1978). Toward a model of text comprehension and production. *Psychological Review*, 85, 363–394.
- Lakoff, G. (2016). Language and emotion. *Emotion Review*, 8 (3). 269-273.
- MacIntyre, P. D. (2016). So Far So Good: An Overview of Positive Psychology and Its Contributions to SLA [A]. In Gałajda, D. (ed.). *Positive Psychology Perspectives on Foreign Language Learning and Teaching*. New York: Springer, 3-20.

- MacIntyre, P. D. (2017). An overview of language anxiety research and trends in its development [A]. In Gkonou, C., Daubney, M. & Dewaele, J. M. (eds.). *New Insights into Language Anxiety: Theory, Research and Educational Implications*. Bristol: Multilingual Matters, 11-30.
- Menard-Warwick, J. (2009). *Gendered identities and immigrant language learning*. Clevedon: Multilingual Matters.
- Mercer, S. (2006). Using journals to investigate the learners' emotional experience of the language classroom. *Estudios de Linguística Inglesa Aplicada*, 6, 63-91. Retrieved from <http://institucional.us.es/revistas/elia/6/art.4.pdf>
- Miller, E. R. (2011). Indeterminacy in interview research: Co-constructing ambiguity and clarity in interviews with an adult immigrant learner of English. *Applied Linguistics*, 32 (1), 43-59. doi: 10.1093/applin/amq039
- Minner, F. (2019). Emotions, language and the (un-) making of the social world. *Emotions and Society*, Vol. 1(2,). pp. 215-230]
- Morgan, P.L. Farkas, G. and Wu, Q. (2012). Do Poor Readers Feel Angry, Sad, and Unpopular?. *Sci Stud Read*. 16(4): 360–381
- Mulligan, K., & Scherer, K. R. (2012). Toward a Working Definition of Emotion. *Emotion Review*, 4 (4), 345-357.
- Norton, B. (2000). *Identity and language learning: Gender, ethnicity and educational change*. Harlow: Pearson Education Limited.
- Pavlenko, A. (2008). Emotion and emotion-laden words in the bilingual lexicon. *Bilingualism: Language and Cognition* 11(2). 147–164
- Pavlenko, A. (2013). The affective turn in SLA: From “affective factors” to “language desire” and “commodification of affect’.” In D. Gabry-Barker & J. Bielska (Eds.), *The affective dimension in second language acquisition*, 3-28. Clevedon: Multilingual Matters.
- Pekrun, R. (2014). *Emotions and learning (Educational Practices Series, Vol. 24)*. International Academy of Education (IAE) and International Bureau of Education (IBE) of the United Nations Educational, Scientific and Cultural Organization (UNESCO), Geneva, Switzerland.

- Pekrun, R., Elliot, A. J., & Maier, M. A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational Psychology, 101*(1), 115-135.
- Pekrun, R., Frenzel, A. C., Goetz, T., & Perry, R. P. (2007). The control-value theory of achievement emotions: An integrative approach to emotions in education. In P. A. Schutz & R. Pekrun (Eds.), *Emotion in education (pp. 13-36)*. San Diego, CA: Academic Press.
- Pekrun, R., Goetz, T., Frenzel, A. C., Barchfeld, P., & Perry, R. P. (2011). Measuring emotions in students' learning and performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary Educational Psychology, 36*(1), 36-48.
- Pekrun, R., Goetz, T., & Perry, R. P. (2005). Achievement emotions questionnaire (AEQ): User's manual (Unpublished manuscript). Munich: University of Munich.
- Pessoa L. (2008). On the relationship between emotion and cognition. *Nat. Rev. Neurosci, 9*, 148–158.
- Petrides, K. V., & Furnham, A. (2003). Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality, 17*, 39-57.
- Phelps EA. (2006). Emotion and cognition: insights from studies of the human amygdala. *Annu. Rev. Psychol. 57*:27–53.
- Prior M. T. (2019). Elephants in the room: An “affective turn,” or just feeling our way? *The Modern Language Journal, 103* (2): 516-527.
- Ridderinkhof, K. R., Ullsperger, M., Crone, E. A., & Nieuwenhuis, S. (2004). The role of the medial frontal cortex in cognitive control. *Science, 306*, 443–447.
- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review, 110*, 145–172.
- Saarni, C. (1999). *The development of emotional competence*. New York: Guilford.
- Saif, M. (2018). Obtaining reliable human ratings of valence, arousal, and dominance for 20,000 English Words. In *Proceedings of The Annual Conference of the Association for Computational Linguistics (ACL)*.
- Sarmah, H.K. and Bora Hazarika, B. (2012). Determination of Reliability and Validity measures of a questionnaire. *Indian Journal of Education and Information Management, 1*(11), 508-517. 1

- Trommsdorff, G. (2006). Development of Emotions as organized by culture. In ISSBD Newsletter 49, (1), 1-4.
- Tyng, C. M., Amin, H. U., Saad, M. N. M., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in Psychology*, 8, 1454.
- Um, E.R., Song, H. & Plass, J. (2007). The Effect of Positive Emotions on Multimedia Learning. In C. Montgomerie & J. Seale (Eds.), *Proceedings of ED-MEDIA 2007--World Conference on Educational Multimedia, Hypermedia & Telecommunications* (pp. 4176-4185). Vancouver, Canada: Association for the Advancement of Computing in Education (AACE). Retrieved September 11, 2021 from <https://www.learntechlib.org/primary/p/25979/>.
- Wierzbicka, A. (1999). *Emotions across languages and cultures: Diversity and universals*. Cambridge University Press
- Zwaan, R. A., & Radvansky, G. A. (1998). Situational models in language comprehension and memory. *Psychological Bulletin*, 123, 162–185.

Appendix A

Read the passage carefully and answer the questions:

Ice-cream

For two months, I have been trying to decide who makes the best ice cream. I have narrowed it down to my four favorite manufacturers: Häagen-Dazs, Goodies, Disco, and Twinkle.

Let's start with Häagen-Dazs. Häagen-Dazs makes very wonderful ice cream. They have lots of different flavors, but this doesn't really matter to me. That's because I always get lovely coffee flavor. They make the best coffee ice cream in the world. I've never had hot coffee, but people tell me that Häagen-Dazs coffee ice cream tastes just like the real thing. Also, Häagen-Dazs uses all cool and natural ingredients to make their ice cream healthy. This is an exciting idea!

Second, we have Goodies. Goodies makes amazing ice cream. Like Häagen-Dazs, Goodies uses all beautiful ingredients. They only make three different flavors—strawberry, vanilla, and chocolate—but they make them very well. The strawberry is so amazing. Every bite of it reminds me of the strawberries that I used to pick behind my old house. It is rich in flavour The vanilla is so wonderful and delicious. It is very smooth and has a refreshing, creamy taste. The chocolate is so fantastic. It is made with real cocoa beans from Bolivia. I didn't know where Bolivia is so I decided to look for it on a map. After an exciting search, I discovered that it is in South America! That's a long way to go to get cocoa, so it must be excellent. I would say that the only drawback about Goodies ice cream is that they only make three different flavors.

Third, we have Disco. Disco ice cream is okay. They have many great flavors. Actually, the Disco flavor I like is Bubblegum. It is vanilla ice cream with little chunks of bubblegum in it. After you eat the ice cream, you can blow bubbles with the gum. That's pretty joyful. Finally, there is Twinkle. Twinkle ice cream is good. The positive thing about Twinkle is that it is cheap. You can buy a whole carton of twinkle ice cream for \$4.50. That's only two weeks' allowance for me.

Appendix B

Ice-cream

Read the following passage and answer the questions:

For two months, I have been trying to decide who makes the best ice cream. I have narrowed it down to my top four manufacturers: Häagen-Dazs, Goodies, Disco, and Twinkle.

Let's start with Randolph Farms. Häagen-Dazs makes reputable ice cream. They have lots of different flavors, but this doesn't really matter to me. That's because I always get coffee flavor. They make coffee ice cream. I've never had hot coffee (the drink) but people tell me that Häagen-Dazs coffee ice cream tastes just like the real thing. Also, Häagen-Dazs uses all natural ingredients to make their ice cream.

Second, we have Goodies. Goodies makes ice cream. Like Häagen-Dazs, Goodies uses all natural ingredients. They only make three different flavors—strawberry, vanilla, and chocolate. The strawberry is most requested flavor. Every bite of it reminds me of the strawberries that I used to pick behind my old house. The vanilla is made from natural ingredients. It is smooth and has a creamy taste. The chocolate is made with real cocoa beans from Bolivia. I didn't know where Bolivia is so I decided to look for it on a map. After searching, I discovered that it is in South America! That's a long way to go to get cocoa. I would say that the only drawback to Goodies ice cream is that they only make three different flavors.

Third, we have Disco. Disco ice cream. They don't have many flavors. Actually, the only Disco flavor requested by customers is Bubblegum. It is vanilla ice cream with little chunks of bubblegum in it. After you eat the ice cream, you can blow bubbles with the gum. Finally, there is Twinkle. Twinkle is that it is relatively inexpensive. You can buy a whole carton of twinkle ice cream for \$4.50. That's only two weeks' allowance for me.

Appendix C

Read the passage carefully and answer the questions:

Unhealthy mouth

It is sad to have food stuck between your teeth for long periods of time. This is because food attracts germs, germs produce acid, and acid hurts your teeth and gums. Flossing helps to remove the food that gets stuck between your teeth. This explains why flossing helps to keep your mouth healthy, but some doctors say that flossing can be also good for your heart.

It may seem depressing that something you do for your teeth can have any dreadful effect on your heart. A toothache will cause you to cry. Doctors have come up with a few ideas about how flossing works to keep your heart healthy. One idea is that the germs that will hurt your teeth and can leave the mouth and travel into your blood. Germs that get into the blood can then attack your heart in a bad shape. Another idea is based on the fact that when there are too many germs in your mouth, the body tries to fight against these super hurtful germs. For some reason, the way the body fights these mouth germs may end up weakening the heart over time. It will devastate your health and make you have a depressing mood. It will make your teeth hurting.

Not every doctor agrees about these ideas. Some doctors think that the link between good flossing habits and good heart health is only a coincidence. A coincidence is the occurrence of two or more events at one time apparently by mere chance. The incidence of these events is completely random, as they do not admit of any reliable cause and effect relationship between them. For example, every time I wash my car, it rains. This does not mean that when I wash my car, I somehow change the weather. This is only a coincidence. Likewise, some doctors think that people who have bad flossing habits just happen to also have heart problems, and people who have good flossing habits just happen to have healthy hearts.

The theory that flossing your teeth helps to keep your heart healthy might not be true. But every doctor agrees that flossing is a great way to keep your teeth away from **suffering**. So even if flossing does not help your heart, it is sure to help your teeth. When you have bad teeth, you will make a fake smile. It will make you super sad and grim when you see your photos. This is enough of a reason for everyone to floss their teeth every day

Appendix D

Read the passage carefully and answer the questions:

Food stuck between your teeth for long periods of time. This is because food attracts germs, germs produce acid, and acid spreads in your teeth and gums. Flossing helps to remove the food that gets stuck between your teeth. This explains why flossing helps to keep your mouth healthy, but some doctors say that flossing benefits your heart.

It may seem strange that something you do for your teeth can have any effect on your heart. Doctors have come up with a few ideas about how flossing works to keep your heart healthy. One idea is that the germs can leave the mouth and travel into your blood. Germs that get into the blood can then attack your heart. Another idea is based on the fact that when there are too many germs in your mouth, the body tries to fight against these germs. For some reason, the way the body fights these mouth germs may end up weakening the heart over time.

Not every doctor agrees about these ideas. Some doctors think that the link between flossing habits and good heart health is only a coincidence. A coincidence is the occurrence of two or more events at one time apparently by mere chance. The incidence of these events is completely random, as they do not admit of any reliable cause and effect relationship between them. For example, every time I wash my car, it rains. This does not mean that when I wash my car, I somehow change the weather. This is only a coincidence. Likewise, some doctors think that people who have bad flossing habits just happen to also have heart problems, and people who have good flossing habits just happen to have healthy hearts.

The theory that flossing your teeth helps to keep your heart healthy might not be true. But every doctor agrees that flossing keeps your teeth healthy. So even if flossing does not help your heart, it is sure to help your teeth. This is enough of a reason for everyone to floss their teeth every day.