

The Effect of Emotions on Reading Comprehension

Luoyuan Zhang^{1,a,*}

¹*School of Foreign Languages, Guangzhou College of Technology and Business, No. 5 Guangming Road, Haibu District, Shiling Town, Huadu District, Guangzhou, Guangdong Province, China*
a. A02504723@lawsonstate.edu

**corresponding author*

Abstract: Reading comprehension is very important to people's daily lives, and the influence of emotions on human thinking and cognition also affects the level of comprehension of text; the influence of emotions on reading comprehension is crucial to psychological research and educational practice. The purpose of the study is to review, analyze, and debate the prior literature in this area in two ways: the effects of positive and negative emotions on reading comprehension respectively. Regarding the influence of positive emotions on reading comprehension, the study finds that most of the research in this direction focuses on the specific area of second language acquisition, and many scholars further explore it in depth through the framework of psychological theory. Teachers can stimulate students' emotional resonance through music stimulation to help students improve their reading comprehension; Regarding the impact of unpleasant feelings on reading comprehension, the research field in this direction is mostly focused on schools, and the research targets are mostly student groups. Future research can be conducted on the influence of external factors such as emotion and music on reading comprehension, and discuss gender differences in the triggering effects of external factors; the research object can also be expanded from the student population to certain professions, a certain age group, etc. In addition, psychology can conduct cross-disciplinary research with drama education, and it is important to investigate the impact of theatre education on Chinese students' acquisition of a second foreign language from a psychological standpoint.

Keywords: positive emotion, negative emotion, reading comprehension

1. Introduction

Reading comprehension plays an indispensable role in people's daily lives, whether it is watching the news, reading policies introduced by the government, reading letters, reading extracurricular books and all other vectors that require human beings to rely on the text to convey information; and the impact of emotions on human thinking and cognition at the same time will have an impact on the degree of comprehension of the text. (For example, a person in extreme distress may briefly be unable to understand the meaning of the other person's words.)

The effect of emotion on reading comprehension is critical to psychological research and educational practice, and there are many scenarios in which it can be applied. For second language teachers, they can take a more objective approach to assess their students' reading comprehension

rates, and for counsellors, they can provide theoretical support and next-step guidance and treatment to their clients when they ask questions about reading difficulties.

Dewaele, in his study of emotions in the second language acquisition reading skills of secondary school students, found that many students were in a state of coexistence of positive and negative emotions in the reading process [1]. In this reality, it becomes more practical to integrate positive psychology with language teaching. Positive psychology (pp) urges educators to combine language instruction with positive education [2]. A practical view is to embrace, utilize and optimize strengths [2]. According to Seligman, a better understanding of learners' emotions can improve learners' well-being [3]. In addition, emotion theories and empirically validated emotion-based interventions in milieu teaching can help reflective teachers to better understand the principles of milieu teaching prior to implementing milieu teaching. Teachers of second languages can use PP to assist students increase positive emotions, reduce stress, improve wellbeing, and learn more effectively [2]. To enhance effective teaching, Mercer & Gkonou advise implementing emotional intelligence training programs [4].

Using the cardiovascular indicator ---- respiratory sinus arrhythmia (RSA), Daley looked on the connection between reading comprehension and emotional responses in secondary school students., and found that students with a low vocabulary produce more negative emotions during the reading process, which can lead to more negative evaluations of the text itself, which in turn affects the RSA, which is the indicator, to decrease, making such students less able to read [5].

The author discovered that the influence of emotions on reading comprehension can also be coupled with the field of theatre education through a comparative review of the literature of previous researchers in the subject. At present, the field of theatre education mainly focuses on theatre paradigms, theatre theories, teaching methods and so on. There is less literature exploring the role of drama education on Chinese students' second foreign language acquisition from a psychological perspective, combined with psychological research and analysis methods, or based on psychological theories, which needs to be further explored and researched.

The purpose of this study is to analyze and summarize the previous literature in this area, to develop a hypothesis for cross-disciplinary analysis, and to give feasible suggestions for second language teachers to implement in teaching reading in the future.

2. Study Subjects

2.1. Emotion and Reading Ability

The first subject is emotion. A person's attitudinal experience of something objective and the resulting behavioral response are both referred to as emotion. It is often thought of as a mental activity that is mediated by a person's objectives and needs. And emotions have a significant impact on the physical and mental health of humans. Positive emotions can boost a person's immunity, improve physical health, increase happiness and self-esteem, and improve a person's productivity at work and school. On the other hand, negative emotions like despair, anxiety, and excessive stress can be harmful to a person's physical and mental health.

In addition, emotion is also an important factor in human social and interpersonal interactions. Emotions not only affect one's own sociable behavior and attitude, but also affect the feelings and behavior of others. A person who is emotionally stable and positive is not only more likely to build good relationships with others, but is also more likely to be accepted and respected by others.

The second subject is reading ability. Reading ability also known as reading comprehension development, is an aspect of written language development; in other words, reading comprehension development is the development of an individual's ability to use written language to acquire and understand information. As a complex, integrated intellectual skill, its development depends both

on the correct perception of written material and on the knowledge and experience that people already have in their minds, such as knowledge about language, knowledge of the object of study and knowledge of how to read.

Reading is an important talent and can provide unlimited possibilities. For children, this ability will not only have a significant impact on their lives, but will also be partly reflected in their exam results.

Strong reading skills actually mean that children are good at converting various textual and pictorial materials into pictures in their minds. If a child has less experience, the ability to convert pictures is relatively weak. Conversely, the faster they are able to form pictures, the easier reading will be.

Reading makes children's brains more flexible and allows children to use their brains more frequently. According to the dual-coding theory, when students read text, the simultaneous encoding of linguistic and visual information by the brain's left and right hemispheres facilitates the formation of long-term memories.

Reading skills involve the process of feeling and thinking. Feeling, in other words, is empathy, the ability to feel what is happening to someone else as if it were happening to people. The more person feels this way, the more person experiences it.

The power of thinking is simply the force that is generated in the process of thinking. The stronger this force is, the greater the ability to analyze, judge, reason, synthesize, etc.

In other words, through reading, children not only become physically smarter, but mentally they gain a huge variety of abilities.

2.2. Emotion Classification

Emotions are usually divided into positive and negative emotions. Emotional efficacy can also be classified according to this dimension, and emotional efficiency is a self-evaluation of emotional attributes. Valencia describes how much a person is attracted to or rejected by a thing or emotion. Positive emotions are exemplified by pleasure, which is one of the basic human emotions and can be extended to include: pleasure, delight, gladness and other specific emotions. It refers to the mental state of pleasure, peace, calmness and contentment that people feel when they feel something external brings them inside, and is a specific expression of emotion. The degree of pleasantness can be classified from weak to strong: satisfaction, pleasure, unusual joy, and ecstasy. There is a specific emotion to introduce: It is defined as "enjoyment, fun, interest, and lack of boredom" to enjoy learning a foreign language [6].

Negative emotions, taking anxiety as an example. Anxiety is an irritable emotion to the result of excessive worry about the safety of loved ones or one's own life, future and destiny. The components include anxiety, worry, concern, nervousness, panic, and unease. Critical situations and unpredictable and unmanageable events are associated with it. There is a specific emotion to introduce: The term "foreign language classroom anxiety" (FLCA) refers to three characteristic anxieties: test anxiety, fear of failing, and communication anxiety [6].

2.3. Influencing Factors

There are other factors can affect correct reading comprehension rates. For example, vocabulary size. The extent of one's vocabulary is seen to be a key indicator of one's capacity to understand written materials, and there is a strong correlation between the two [7]. So the finding can offer some useful suggestions for teachers. Key vocabulary acquisition components such word definitions, synonyms, antonyms, word combinations, and semantic and pragmatic elements should be understood by both teachers and students. Learners of the English language can increase their

vocabulary knowledge by using a range of teaching techniques. Teachers need to become more conscious of how word is used in the classroom. Additionally, they ought to show their pupils how to profit from the corpus strategy in the classroom.

Another impact factor is reading strategy. The study found that rapid reading has a favorable impact, thus the researcher advises diversifying teaching techniques to be appropriate for the school setting [2]. In order to figure out how emotions make influence on reading comprehension, this paper should pay attention to these factors.

In addition to individual differences in reading speed and information decoding speed, emotion has a critical impact on an individual's ability to accurately and clearly capture and understand key information in a text during reading comprehension. Investigating the link between emotion and reading comprehension is therefore quite interesting.

3. The Effect of Positive Emotional Potency on Reading Comprehension

3.1. Literature Review

3.1.1. Second Language Acquisition (SLA)

Many scholars have examined the impact of emotion on reading comprehension from different dimensions and scales, and most of them will focus on the specific area of second language acquisition. In a study of emotions in secondary school students' second language acquisition reading skills, Dewaele found that many students were in a state of both positive and negative emotions during reading. In this reality, it was more practical to combine positive psychology and language teaching. Teachers should mix positive education with language instruction, according to positive psychology (pp) [8]. Utilizing, capitalizing on, and maximizing strengths was one pragmatic viewpoint [9]. Seligman asserted that elevating learners' wellbeing can be possible through a deeper comprehension of their emotions [3]. Additionally, before putting PP principles into practice, reflexive teachers may have a better understanding of PP principles with the use of emotion theories within PP and empirically verified PP-based interventions on emotions. Teachers of second languages should apply positive psychology (PP) ideas to help students increase their feelings of well-being, reduce stress, and learn more effectively. [2,8]. Similar recommendations were made by Mercer & Gkonou for including emotional intelligence training programs to promote effective teaching [4].

3.1.2. Relevant Studies in Other Dimensions

In a numerical meta-analysis of neuroimaging research,, Stevens found that the left amygdala of males showed stronger activation when stimulated by positive emotions compared to females, and that various amino acids and vitamins in the amygdala, such as B-complex vitamins, were able to promote neuron synthesis in the body and enhance brain memory and response, and that males were therefore able to outperform females when stimulated by positive emotions in reading comprehension [10]. Hauck did a study about the relation between music, text and emotion [11]. Researchers discovered that happy and sad moods can be carried over from music to text and vice versa. Contrary to popular belief, the subject's feelings of valence, arousal, or dominance did not mediate this impact. Additionally, a substantial relationship between text mood and music mood was discovered by that study. If the tone of the text and the music matched, texts were more well-liked, judged to be of higher quality, and participants felt more engrossed in the content [4].

Existing research in this area of study can provide theoretical and empirical support for second foreign language teachers to enhance students' reading comprehension ability.

3.2. Discussion

For the specific research area of the effect of positive emotions on reading comprehension, the author found that most researchers have done a great deal of research related to the specific direction of second language acquisition. Usually, these studies are usually based on different reading methods, vocabulary, and specific students (e.g. students with emotional or behavioral disorders) for in-depth exploration, and also incorporate theoretical frameworks such as positive psychology for further research; differences in brain developmental progress between males and females can affect their reading comprehension output. In general, females have an innate advantage in the left hemisphere language comprehension area of the brain, whereas males not only have the normal capacity of the left hemisphere language comprehension area, but also a more developed right hemisphere locomotor center, which determines that males have an advantage over females in general in terms of their sense of balance and the big picture. This is able to be demonstrated by the different approaches taken by male and female students when faced with the same dilemma. When both males and females are faced with complex sentence structures, many difficult words, and difficult questions, males prefer to read the whole text and use contextual guessing to aid comprehension, while females solve the problem by analyzing the structure and composition of the sentence one sentence at a time. Therefore, gender differences may be a potential factor affecting reading comprehension, which deserves further study, while there are fewer studies on the effects of gender differences on reading comprehension of emotional stimulation, musical stimulation, environmental stimulation, and other related factors.

Based on the literature that has been collected, the author found that teachers can use music to emotionally stimulate students who will be working on reading comprehension.

According to the emotional tone of the text to be trained or the emotional tone conveyed by the key passages, relevant music can be played or a similar scene can be created before reading comprehension training, because the interaction of auditory input on the visual reception of information can further influence the reading subject's overall impression of the virtual environment and atmosphere, thus assisting them in enhancing their reading comprehension accuracy.

In addition to the methods outlined above, the author has discovered that the field of theatre education can be used to combine the influence of good emotions on reading comprehension. At present, the field of theatre education mainly focuses on theatre paradigms, theatre theories, teaching methods etc. There is less literature on the role of theatre education on Chinese students' second foreign language acquisition from a psychological perspective, combined with psychological research and analysis methods, or based on psychological theories, which can be further explored and researched .

4. The Effect of Negative Emotional Potency on Reading Comprehension

4.1. Literature Review

A number of researchers have looked into how students' reading output is impacted by negative emotions because reading comprehension is at the forefront of the study of second language acquisition.

Daley used the cardiovascular indicator respiratory sinus arrhythmia (RSA) to study the association between emotional responses and reading performance in secondary school students, and found that students with low vocabulary levels produced more negative emotions during reading, which could make students produce more negative evaluations of the text itself, which

subsequently affects the reduction of RSA as an indicator, so that such students were less able to read [2].

When reading under high or low anxiety conditions, Zaccoletti studied the role of physiological self-regulation and working memory updating. He discovered that when students were completing a learning task linked to high levels of anxiety, higher resting HRV (a physiological self-regulation component) intervened in the relationship between anxiety and text comprehension [12].

MacIntyre conducted a study on the relationship between motivation, anxiety in second language acquisition in accordance with Gardner's socio-educational model. It was found that emotions pervade all people's activities, that they have some influence on everything individuals do, that strong emotions can disrupt cognitive and mental processes, that language anxiety is negatively related to performance in language courses, that as language anxiety dissipates, learners are able to partially compensate for the difficulties of the previous stages by increasing their effort, and that language anxiety plays a causal role in explaining individual differences in achievement [4].

Existing research in this area of study can provide theoretical and empirical support for second language teachers to improve students' reading comprehension, and can guide teachers on how to utilize negative emotions, such as anxiety, to counteract students' reading comprehension skills in order to improve reading comprehension development.

4.2. Discussion

For the specific research area of the effect of negative emotions on reading comprehension, the author found that researchers had done a great deal of research related to this specific direction of second language acquisition. Usually, these studies mostly focus on the role of negative emotions on individual self-regulation and how it promotes the brain's working memory; or discuss the relationship between emotions, motivation and performance in language instruction. It is not difficult to find that most of the studies focus on the students as a group, and the research environment also focuses on the school as a field; while there are fewer studies on gender differences in the influence of external factors such as emotion, music, and environment on reading comprehension, and similarly, the research target can be expanded from the students as a group to include certain professions, people of a certain age, and so on.

Based on the collected literature, the author found that teachers could provide emotional stimulation to students who are about to engage in reading comprehension by moderately controlling time training. The overall sense of the environment and atmosphere could be impacted by the interaction of auditory input with visually obtained information, as per the multimodal transfer effect of emotional attribution.

It is important to note that teachers need to teach students reading speed strategies before conducting time-limited training. This is because the strategy can increase students' motivation to learn and increase their self-confidence in reading by increasing their proficiency in acquiring the reading speed strategy. The time-limited training can make students to produce a certain degree of anxiety. Being under the stimulation of moderate anxiety, the atmosphere can enhance the students' physiological self-regulation ability. In this state, students' self-regulation ability is stronger, and the reversal of anxiety can promote students' understanding of the text. Coupled with the time constraints, the students' attention is greatly enhanced, which serves the purpose of enhancing the reading training ability.

After the time-limited training, second language teachers can combine the principles of positive psychology to help students enhance their positive emotions, relieve stress, and inform students that negative emotions are not useless, and can also have a positive effect when used in moderation, thus allowing students to achieve a higher sense of achievement and happiness, stimulating their learning motivation and opening up cognitive horizons for them.

5. Conclusion

In order to better comprehend the effects of emotions on reading comprehension, most academics have focused their current work on the specific domain of second language acquisition. For in-depth exploration, these studies typically focus on a variety of reading strategies, vocabulary, particular individuals (such as those with emotional or behavioral difficulties), and also incorporate theoretical frameworks like positive psychology for future study.

Additionally, the discipline of theatrical education can be used to examine how pleasant emotions affect reading comprehension. However, there is less literature on the psychological impact of theater education on Chinese students' acquisition of second foreign languages, combined with psychological research and analysis methods, or based on psychological theories, which needs to be further explored and researched. This is helpful for promoting the development of theatre education and the influence of positive psychology in China to the expansion of the well-being; at the same time, in China, positive psychology has a particularly strong influence on the development of the arts.

References

- [1] Dewaele Jean-Marc & LI Chengchen.(2020).*Emotions in second language acquisition:A critical review and research agenda. Foreign language circles* (01),34-49.
- [2] Li C. *A Positive Psychology Perspective on Chinese Students' Emotional Intelligence, Classroom Emotions, and EFL Learning Achievement* . Xiamen: Xiamen University, 2018.
- [3] Seligman M. E. *Flourish: A Visionary New Understanding of Happiness and Well-Being*. New York: Free Press, 2011.
- [4] Mercer S & Gkonou C. *Teaching with Heart and Soul* . In Gregersen T. S &MacIntyre P. D. (eds.). *Innovative Practices in Language Teacher Education:Spanning the Spectrum from Intra- to Inter-Personal Professional Development*. Cham: Springer International Publishing, 2017. 103-124.
- [5] Daley, S. G., Willett, J. B., & Fischer, K. W. (2014). *Emotional responses during reading: Physiological responses predict real-time reading comprehension. Journal of Educational Psychology*, 106(1), 132–143.
- [6] Li, C., & Wei, L. (2022). *Anxiety, enjoyment, and boredom in language learning amongst junior secondary students in rural China: How do they contribute to L2 achievement? Studies in Second Language Acquisition*, 45, 93–108(*Second Language Acquisition* (2023)), 1–16.
- [7] Al-Khasawneh, F. (2019). *The Impact of Vocabulary Knowledge on the Reading Comprehension of Saudi EFL Learners. Journal of Language and Education*, 5(3), 24–34.
- [8] Mercer S., MacIntyre P. D., Gregersen T. & Talbot K. *Positive Language Education: Combining Positive Education and Language Education . Theory and Practice of Second Language Acquisition*, 2018, 4(2): 11-31.
- [9] MacIntyre P. D., Dewaele J.-M., Macmillan N. & Li C. *The emotionalunderpinnings of Gardner's Attitudes and Motivation Test Battery* . In MacIntyre P D & Al-Hoorie A (eds.). *Contemporary Language Motivation Theory: 60 Years Since Gardner and Lambert (1959)*. Bristol: MultilingualMatters, 2019. 57-79.
- [10] Stevens, J. S., & Hamann, S. (2012). *Sex differences in brain activation to emotional stimuli: A meta-analysis of neuroimaging studies. Neuropsychologia*, 50(7), 1578–1593.
- [11] Hauck, P., & Hecht, H. (2023). *Emotionally congruent music and text increase immersion and appraisal. PLOS ONE*, 18(1), e0280019.
- [12] Zaccoletti, S., Raccanello, D., Burro, R., & Mason, L. (2022). *Reading with induced worry: The role of physiological self-regulation and working memory updating in text comprehension. British Journal of Educational Psychology*, 93(Suppl. 1), 26–47(*British Journal of Educational Psychology* (2023)).