

A Study of Language Metaphor and Emotional Expression from the Perspective of Second Language Acquisition

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Abstract: Metaphors are a critical aspect of acquiring English. It is grounded in the conceptual system of English L1 users, so there might be a discrepancy between the comprehension and utilization of learners of English as L2, especially if the metaphors entail one aspect of pragmatics, emotion. This paper concentrates on the comprehension and utilization of emotion metaphors in L2 English learners, composing mainly of high school students. The participants must fill out a questionnaire containing seven questions examining the aspects mentioned above of emotion metaphors and metaphors. After analyzing the answers, comprehension can be categorized into two categories—basic and deep. By dividing the level of comprehension, a correlation can be drawn between the comprehension level and production of emotion metaphors, using MIP, an established method to identify whether there is a metaphorical expression or not in a discourse. This paper tests the less focused side of the metaphor study, trying to draw a primary conclusion on the relationship between comprehension and utilization of metaphors in hopes of allowing learners of English as L2 to understand more about the mechanism of metaphors and how they are applied to describe emotions.

Keywords: Second Language Learning, Metaphors, Pragmatics

1. Introduction

1.1. Research Background

Certain concepts are metaphorically structured in people's minds, especially emotions [1]. The primary mechanism of metaphorical expression is to bring together two different domains: the target domain, which is considered to be more abstract, and the source domain, the one that is more concrete [2]. By creating a network between these two domains, emotional experiences that are less sharply delineated can be more sharply delineated [1]. There are various hypotheses regarding the function of using metaphors in emotion expression, and the most prominent ones are the inexpressibility hypothesis (emotions are difficult to express when using standard languages), compactness hypothesis (metaphors allow people to communicate more meanings), and vividness hypothesis (intense emotional state generates the more pressing need of detailed description), all indicating that metaphors are chief cognitive structures [2]/[3]. However, other factors must be considered when examining metaphors relating to emotions in different languages. The social context and the nature

of the human body are two factors that may result in different metaphor production, as researchers examined the conceptualization of happiness and anger in both English and Chinese [4]/[5]. In brief, there will be a discrepancy between English speakers as the first language and the English speakers as the second language in expressing emotions using metaphors, and the mechanism for their production has remained largely unknown.

1.2. Research Gap

Until recently, the researchers have predominantly concentrated on metaphoric competence, teaching metaphors in classroom settings, and transferring emotions in different pragmatic instances such as complaining, requesting, and responding to compliments [6]/[7]. Furthermore, primary purposes for L2 learners of English for using metaphors when expressing emotions have been investigated, and they are mostly comprised of two aspects: expressing abstract ideas as a clarifying function and resolving communicating problems [3]. One of the papers by Littlemore and Barnden in 2011 covered the difficulties of English learners in acquiring metaphors in university-level lectures [8]. Nevertheless, English learners of other proficiencies have not been tested, and the degree to which they understand given metaphors and their level of production is not being examined from a perspective of comprehending and utilizing metaphors of emotions.

1.3. Research Objective

The examination will be focused mainly on the level of metaphor acquisition of English learners of Chinese high school students using an evaluative questionnaire. As metaphors are being entrenched in people's conceptual systems for L1 English users, there is a chance that L2 English learners are only transferring their knowledge of the L1 language or simply memorizing metaphors, resulting in non-understanding and misinterpretations of their underlying structures in their corresponding cognitive representations. Two aspects must be examined to test these English learners' comprehension degrees and mistake types. The first is whether these high school students acquire metaphors while acquiring some parts of the conceptual system relating to emotions or do they acquire the surface meaning of some emotional metaphors. The second aspect will focus on the correlation between the level of understanding of metaphors relating to emotions and their production ability by examining the number of valid emotional metaphors, using the metaphor identification procedure (MIP) to test the validity of metaphor production [9].

2. Methods

2.1. Method/material/data Used in the Study

2.1.1. Method

The method chosen for this paper is a self-reported questionnaire focusing on both the comprehension and utilization aspects of emotional metaphors. The benefits of using a questionnaire are to obtain a large base of quantitative data and to conclude correlations, allowing the observation of general trends.

2.1.2. Content of the Questionnaire

The questionnaire consists of five parts: guide in, mechanism, understanding, transition, and production.

(1) Guide in: This part provides examples of general metaphors like "Time is money" and "You are my sunshine." to give participants a lead into the more specific metaphors that appear later.

(2) Mechanism: This part is set to relate to the principles and explanations of metaphor expressions. Each option contains one aspect of metaphor's functions: grounded in our conceptual systems, abstract into the concrete, relationship with bodily experiences, emotion conveyance, and the conceptualization of emotional experience.

(3) Understanding: It is aimed to provide participants with the focus of our study, which is emotion metaphors and their comprehension. There are two sets of metaphors concerning the emotion of happiness and anger excerpted from Metaphorical Expressions of Anger and Happiness in English and Chinese and are guaranteed to be valid in English expressions [5]. The options are designed so that the participants can choose from different explanations of these two groups of metaphors. Some options contain a description of orientational metaphors, and the "ANGER IS FIRE" metaphor precisely, while some only focus on fixed collocation of these expressions, which are designed to be wrong.

(4) Transition: This question sums up the comprehension section and leads into the production section, which requires participants to distinguish possible factors hindering the acquisition process, such as cultures, deep structures, and metaphoric competence.

(5) Production: This part is meant for participants to generate emotion metaphors (if not, general metaphors are acceptable) for validity testing.

2.1.3. Explanation

These questions are mainly concentrated on existing areas of metaphor study. The examples are given for reference so that all the participants can have the same level of understanding of this topic. These references will guide the participants from comprehension to production of metaphors, reflecting the intuitive ability of participants to produce metaphors, thus minimizing the possibility of acquiring prior knowledge.

2.1.4. Participants

Because there is a positive relationship between one's English fluency level and the ability to produce metaphors, most participants chosen have acquired a medium to high English proficiency level [3]. Though this may reduce the scope of the participants, if the productions are few and are mainly invalid, the possibility of analyzing them will also be significantly reduced. Another consideration is that they are still high school students actively learning English. The ability to accept new information and the processing rate are better than those who have fossilized English.

2.2. Introduction of the Experiment

2.2.1. Metaphor Comprehension (all multiple-choice questions)

The comprehension has been categorized into two types for the convenience of the study: basic comprehension and deep comprehension. Basic comprehension emphasizes contextual collocations (2D and 3D), repetitive learning methods (5B), etc; deep comprehension stresses conceptual system (2A), experience and emotion cognition (2C, 2E, 3A-C), cultural differences (5D), learning strategies (5A, 5E).

2.2.2. The Validity of Metaphors

The process is examined by MIP to compare the context meaning with the primary purpose [9].

2.2.3. Intentions

The level of comprehension can be examined through the choices made by participants. A correlation can be made by testing the validity of metaphors and comparing the level of understanding with production.

2.2.4. Further Possibilities

(1) Similarities with L1 (Chinese metaphors): By analyzing the metaphor productions, a conclusion can be drawn on whether there is a direct transfer of emotional expressions.

(2) Types of invalidity: The invalidity can be categorized into two types: over-specification (valid but too narrow) and under-specification: (valid but too broad) [8]. These types of invalidity can be analyzed once a production fails the MIP test.

3. Results

The participants are categorized into three groups based on their answers in the last question, in which they were asked to come up with metaphorical expressions similar to the ones provided, such as “I’m feeling up” and “time is money”. Group 1 participants are capable of providing authentic and valid metaphors and Group 2 can only come up with few, whereas Group 3 participants cannot think of any.

The analysis of the result of the questionnaire is based on four perspectives: the overall analysis and the analysis based on each group’s answers.

3.1. Overall Analysis

About 90.63% of the participants, who have acquired Chinese as L1 and English as L2, are aware of certain metaphorical expressions in English. About 87.50% of the participants have encountered metaphorical language, while 87.38% of the participants are capable of using those metaphorical expressions when expressing emotions.

Table1: Overall Analysis on Basic Aspects

	Yes (%)	No (%)
Aware of expressions	90.63	9.38
Have encountered	87.50	12.50
Would use	84.38	15.63

Around 71.88% of the participants agree that metaphorical expressions (such as ARGUMENT IS WAR) are rooted in our conceptual systems. Many metaphorical concepts are systematic, so are the aspects of the language we use to discuss them. About half of the participants agree that metaphorical expressions materialize that abstract. About 12.5% of the participants think that metaphorical expressions are unrelated to personal perception and can be comprehended under any context. About 28.13% of the participants agree that metaphorical expression makes the text more attractive but has no significant effect on conveying meaning and understanding emotion. Moreover, approximately 71.88% of the participants agree that metaphorical expressions allow us to conceptualize our emotional experience in terms of more precise terms in terms of our overall life.

Table2: Mechanisms

	Grounded in conceptual system	Abstract to concrete	Not related to perception	Have little effect on emotion and meaning	Conceptualize emotions
Percentage (%)	71.88	53.13	12.50	28.13	71.88

In the third question, participants were given two groups of metaphorical expressions and were asked to summarize the characteristics of them [1].

Examples 1

He is breathing fire.

Boy, am I burning up!

Smoke was pouring out from his ears.

Examples 2

I'm feeling up.

That boosted my spirits.

We had to cheer him up.

As the result showcases, about 78.13% of the participants recognized that these metaphorical languages are related to emotions. About 78.13% of the participants recognized that the expressions 1 were expressing anger and the metaphor related to which is fire. About 87.50% of the participants recognized that the expressions in examples 2 were expressing happiness, which is related to the metaphor of "up," while about 9.38% of the participants think that the expressions provided are fixed collocations and do not serve any purposes other than enriching the text.

Table3: Comprehension on Guide-in Examples

	Related to emotions	Anger (fire)	Happiness (up)	Only collocations
Percentage (%)	78.13	78.13	87.50	9.38

When asked about the transition from comprehending a metaphorical expression to utilizing it, about 68.75% of the participants agree that acquiring metaphors requires the finding of patterns. About 40.63% of the participants believe that metaphors can be acquired through reciting and accumulation. About 87.5% agree that metaphor acquisition requires familiarity with culture and 71.88% of the participants believe that metaphors can be acquired but not as profound as native speakers.

Table4: Transition Between Comprehension and Utilization

	Requires patterns	Can be acquired through reciting	Requires understanding of Culture	Can be acquired but not as profound as native speakers
Percentage (%)	68.75	40.63	87.5	71.88

3.2. Group 1 Only

All of the participants, who have acquired Chinese as L1 and English as L2, are aware of certain metaphorical expressions in English and have encountered metaphorical language, while 81.82% of the participants are capable of using those metaphorical expressions when expressing emotions.

Table5: Group 1 on Basic Aspects

	Yes (%)	No (%)
Aware of expressions	100.00	0.00
Have encountered	100.00	0.00
Would use	81.82	18.18

Around 72.73% of the participants agree that metaphorical expressions (such as ARGUMENT IS WAR) are rooted in our conceptual systems. Many metaphorical concepts are systematic, so are the aspects of the language we use to discuss them. About 72.73% of the participants agree that metaphorical expressions materialize that abstract. None of the participants think that metaphorical expressions are unrelated to personal perception and can be comprehended under any context. About 27.27% of the participants agree that metaphorical expression makes the text more attractive but has no significant effect on conveying meaning and understanding emotion. Moreover, approximately 81.82% of the participants agree that metaphorical expressions allow us to conceptualize our emotional experience in terms of more precise terms in terms of our overall life.

Table6: Mechanisms in Group 1

	Grounded in conceptual system	Abstract to concrete	Not related to perception	Have little effect on emotion and meaning	Conceptualize emotions
Percentage (%)	72.73	72.73	0.00	27.27	81.82

About 90.91% of the participants recognized that these metaphorical languages are related to emotions. About 81.82% of the participants recognized that the expressions 1 were expressing anger and the metaphor related to which is fire. About 90.91% of the participants recognized that the expressions in examples 2 were expressing happiness, which is related to the metaphor of “up,” while about 18.18% of the participants think that the expressions provided are fixed collocations and do not serve any purposes other than enriching the text.

Table7: Comprehension on Guide-in Examples in Group 1

	Related to emotions	Anger (fire)	Happiness (up)	Only collocations
Percentage (%)	90.91	81.82	90.91	18.18

When asked about the transition from comprehending a metaphorical expression to utilizing it, about 54.55% of the participants agree that acquiring metaphors requires the finding of patterns. About 45.45% of the participants believe that metaphors can be acquired through reciting and accumulation. All of the participants in Group 1 agree that metaphor acquisition requires familiarity with culture and 81.82% of the participants believe that metaphors can be acquired but not as profound as native speakers.

Table8: Transition Between Comprehension and Utilization in Group 1

	Requires patterns	Can be acquired through reciting	Requires understanding of Culture	Can be acquired but not as profound as native speakers
Percentage (%)	54.55	45.45	100.00	81.82

3.3. Group 2 Only

About 98.71% of the participants, who have acquired Chinese as L1 and English as L2, are aware of certain metaphorical expressions in English. 87.48% of Group 2 participants have encountered metaphorical language, while 86.93% of the participants are capable of using those metaphorical expressions when expressing emotions.

Table9: Group 2 on Basic Aspects

	Yes (%)	No (%)
Aware of expressions	98.71	1.29
Have encountered	87.48	12.52
Would use	86.93	13.07

Around 62.53% of the participants agree that metaphorical expressions (such as ARGUMENT IS WAR) are rooted in our conceptual systems. Many metaphorical concepts are systematic, so are the aspects of the language we use to discuss them. About 37.53% of the participants agree that metaphorical expressions materialize that abstract. About 25.21% of the participants think that metaphorical expressions are unrelated to personal perception and can be comprehended under any context. About 37.49% of the participants agree that metaphorical expression makes the text more attractive but has no significant effect on conveying meaning and understanding emotion. Moreover, approximately 75.10% of the participants agree that metaphorical expressions allow us to conceptualize our emotional experience in terms of more precise terms in terms of our overall life.

Table10: Mechanisms in Group 2

	Grounded in conceptual system	Abstract to concrete	Not related to perception	Have little effect on emotion and meaning	Conceptualize emotions
Percentage (%)	62.53	37.53	25.21	37.49	75.10

About 75.12% of the participants recognized that these metaphorical languages are related to emotions. All of the participants recognized that the examples 1 was expressing anger and the metaphor related to which is fire and the expressions in examples 2 were expressing happiness, which is related to the metaphor of "up," while none of the participants think that the expressions provided are fixed collocations and do not serve any purposes other than enriching the text.

Table11: Comprehension on Guide-in Examples in Group 1

	Related to emotions	Anger (fire)	Happiness (up)	Only collocations
Percentage (%)	75.12	100.00	100.00	0.00

When asked about the transition from comprehending a metaphorical expression to utilizing it, about 62.50% of the participants agree that acquiring metaphors requires the finding of patterns. About 25% of the participants believe that metaphors can be acquired through reciting and accumulation. About 87.50% of the participants in Group 2 agree that metaphor acquisition requires familiarity with culture and 75% of the participants believe that metaphors can be acquired but not as profound as native speakers.

Table12: Transition Between Comprehension and Utilization in Group 2

	Requires patterns	Can be acquired through reciting	Requires understanding of Culture	Can be acquired but not as profound as native Speakers
Percentage (%)	62.50	25.00	87.50	75.00

3.4. Group 3 Only

About 76.92% of the participants, who have acquired Chinese as L1 and English as L2, are aware of certain metaphorical expressions in English. 77.89% of Group 2 participants have encountered metaphorical language, while 84.62% of the participants are capable of using those metaphorical expressions when expressing emotions.

Table13: Group 3 on Basic Aspects

	Yes (%)	No (%)
Aware of expressions	76.92	23.08
Have encountered	77.89	22.11
Would use	84.62	15.38

Around 76.92% of the participants agree that metaphorical expressions (such as ARGUMENT IS WAR) are rooted in our conceptual systems. Many metaphorical concepts are systematic, so are the aspects of the language we use to discuss them. About 46.15% of the participants agree that metaphorical expressions materialize that abstract. About 15.38% of the participants think that metaphorical expressions are unrelated to personal perception and can be comprehended under any context. About 23.08% of the participants agree that metaphorical expression makes the text more attractive but has no significant effect on conveying meaning and understanding emotion. Moreover, approximately 61.54% of the participants agree that metaphorical expressions allow us to conceptualize our emotional experience in terms of more precise terms in terms of our overall life.

Table14: Mechanisms in Group 3

	Grounded in conceptual system	Abstract to concrete	Not related to perception	Have little effect on emotion and meaning	Conceptualize emotions
Percentage (%)	76.92	46.15	15.38	23.08	61.54

About 69.23% of the participants recognized that these metaphorical languages are related to emotions. About 61.54% of the participants recognized that the expressions in the examples 1 were expressing anger and the metaphor related to which is fire. About 76.92% of Group 3 recognized that the expressions in examples 2 were expressing happiness, which is related to the metaphor of “up,” while about 7.89% of the participants think that the expressions provided are fixed collocations and do not serve any purposes other than enriching the text.

Table15: Comprehension on Guide-in Examples in Group 3

	Related to emotions	Anger (fire)	Happiness (up)	Only collocations
Percentage (%)	69.23	61.54	76.92	7.69

When asked about the transition from comprehending a metaphorical expression to utilizing it, about 84.62% of the participants agree that acquiring metaphors requires the finding of patterns. About 46.15% of the participants believe that metaphors can be acquired through reciting and accumulation. About 76.92% of the participants in Group 3 agree that metaphor acquisition requires familiarity with culture and 61.54% of the participants believe that metaphors can be acquired but not as profound as native speakers.

Table16: Transition Between Comprehension and Utilization in Group 3

	Requires patterns	Can be acquired through reciting	Requires understanding of Culture	Can be acquired but not as profound as native Speakers
Percentage (%)	84.62	46.15	76.92	61.54

4. Discussion

Correlating the results with the group division, it is evident that there is a decrease in the awareness of such expressions and the chance of encountering them comparing Group 1's and Group 2's results. Deep understanding for Group 1 is also significantly higher than in Group 2, as Group 1 chooses more on the options containing conceptual system, experience and emotion cognition, cultural differences, and learning strategies. However, regarding examining given emotion metaphors, Group 2's understanding is more profound than Group 1's, successfully identifying two groups of emotion metaphors. Group 3's results continue to exhibit a decrease in deep understanding as participants choose options containing fixed collocations and repetitive learning methods.

Next, the discussion mainly focuses on testing the validness of the metaphorical expressions provided by group 1 using MIP, which is a method to identify metaphorically used words in discourse developed by the Pragglejaz Group; if the lexical unit in the text-discourse does not apply to the contextual meaning, has a contemporary meaning and can be understood in comparison with it, then that lexical unit can be considered metaphorical [9].

The answers of group 1 participants are authentic metaphorical expressions that are utilizable in daily and formal circumstances. For instance, the participants came up with phrases such as "feeling

blue," "wearing my heart on my sleeves," "on cloud nine," and "The seed of jealousy grows as her opponent becomes more powerful."

Because the lexical units in the examples above would be "blue," "wearing my heart on my sleeves," and "cloud nine," they can be categorized as idioms instead of metaphors. However, the distinction between idioms and metaphors is not made clear, and these lexical units will lose meaning if divided further. Therefore, using MIP and accepting them as idioms, there are differences between the contextual meaning of "blue," "wearing my heart on my sleeves," and "cloud" and their basic meanings. These expressions would be considered metaphorical. For "The seed of jealousy grows as her opponent becomes more powerful," there is an apparent contextual background provided by this participant, and he/she is using the "Jealousy is a seed" metaphor. It is not an imitation of the examples given and passes the MIP test, which suggests that this participant has some understanding of how the metaphor system works, especially in emotions. Nearly all of the metaphors produced by participants categorized as Group 1 are valid, not demonstrating transfers from L1, over-specification, and under-specification.

Group 2's results are less accurate and often deviate from the purpose of this study, which is to produce emotion metaphors; if not, general metaphors that they encountered or learned. Some rough results are: "False calm," "I'm crying like 水龙头 (which means "the tap" in Chinese)," "planes rained down bombs, shells and bullets," and "sorrow," and each of them reveals a type of invalidity. The first production, "false calm," is the most typical type of invalidity, suggesting that this participant lacks the realization of coupling a target domain with a source domain and thus cannot be analyzed using MIP. The second production indicates a direct transfer from this participant's L1, which is Chinese. Though this emotion metaphor passes the MIP test, the "tap" figuratively refers to the water flowing rapidly without control. This participant does not know how to express "the tap" in English. The third type has little to do with emotion, but it still passes the MIP test as "rained" has both context and basic meanings. The fourth participant was only concerned about the emotion side without giving any attention to the metaphor side. There is no evidence of under-specification or over-specification, partially due to the lack of context in this group's production.

As for Group 3, no observable pattern has been noticed. Most of the participant's answers are either "I don't know" or blank, inferring a lower level of production ability.

Between the level of understanding with each group's production results, there is an apparent positive correlation between one's comprehension level and ability to produce emotional metaphors.

5. Conclusion

5.1. Important Findings

There is a correlation between one's level of comprehension and his/her production of emotion metaphors: the more profound the understanding is, the higher the chance of producing valid emotion metaphors, as evident in Group 1's results. For Group 2 and 3 that have less understanding, their results vary from invalidity (transfers and not producing metaphors under the emotion category) to non-response. For those who have gained a more profound understanding of emotion metaphors, their productions are more inclined towards L1 English users as idioms appear in their production; some of the participants in Group 1 can produce emotion metaphors utilizing their cognition, which is a sign of grounding certain expressions in their cognitive systems.

5.2. Future Studies

The field of metaphor is gaining much more attention as teaching metaphors has become an issue in second language acquisition. However, few correlations are made between metaphors and other fields

of study in second language acquisition, such as focusing on form, fossilization, pragmatics, and emotions. Moreover, the cognitive process of L2 learners of English in processing metaphors stays unknown mainly, and it is formidable to quantify the strategies used to crack the code of such metaphors. A combination of interdisciplinary study and method can be examined to shed light on this field and provide insights into metaphor teaching.

5.3. Limitations

The questionnaire's questions are specially formed based on Lakoff's *Metaphors We Live By*, and conclusions made in the previous papers are primarily translated into Chinese in an academic style (The translation serves the function of reducing the bias generated because of language comprehension), so for participants who do not possess prior knowledge of this topic will find it hard to decide the correct answers. In addition, those who have some previous knowledge of this field, or have read the book by Lakoff, will yield results with stronger correlations.

The guide in part of the questionnaire might be abrupt and lack cohesiveness for participants just getting to know these metaphors. We only provide a few examples due to concerns about the form and the time it takes to answer the questionnaire, which should be concise and not time-costing. It is reflected in the first version of our questionnaire, which got feedback claiming that the questions were too complicated and participants could hardly relate to any metaphors they had learned due to the abrupt guide in the section.

When using MIP to test the validity of metaphor production, the analyzing process might be too subjective since only two people make the comparison regarding context meaning and the more basic meaning. In deciding whether a context meaning matches its basic meaning, there might be particular preferences and biases that are not easy to detect. Due to the focus and limitation of our study, we do not further test the MIP results with more people's analysis.

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