How non-native speakers express anger, surprise, anxiety and grief: a corpus-based comparative study

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1. Introduction

Recently, there have been several studies on learner grammar and lexicon using learner corpus data (Granger 1998). Corpus has also opened an exciting door to the investigation of various pragmatic functions and the discourse of genuine language. By only examining small amounts of data, we fail to overlook some interesting rules pertaining to language use, which may be acquired by examining large amounts of data. Corpus analysis is especially useful to compensate for this weakness in the study of language. In this paper, we try to explore some features of English emotional expressions in the Japanese, Chinese and French learner corpora. Although emotional expression has been studied from the perspective of many different disciplines, the study of the use of learners' emotional expressions in SLA has not yet been fully explored. In this study, we will also compare the learners' use of emotional expression against those of native speakers based on the London Lund Corpus (LLC) and Wellington Spoken Corpus (WSC), which hopefully will give us a wider view of the use of English emotional expressions.

2. Studies on the linguistic expression of emotions

Human emotion has been studied in various disciplines; however, there is very little research available on the linguistic expression of emotions. Studies on the receptive ability of emotional expressions are more pervasive than that of productive ability. Rintell (1984) studied Spanish speakers' ability to understand the underlying emotional content of English conversation. The range of emotions classified were pleasure, anger, depression, anxiety, guilt and disgust. She demonstrated that for all the learners, the task of choosing the correct emotion by listening to the conversation was difficult. She also argued that the emotional expression was interesting not only as a core of the study of human behavior but also as a pragmatic function. She explains that emotional expression is considered to be one of the illocutionary acts, because expression of emotion is a speech act in which the listener recognizes the speaker's intention to perform that act. Thus, the utterances that express emotion can simultaneously perform a variety of social and psychological functions. For example, the expression of anger can serve the function of complaining. In other cases, the expression of pleasure may serve the goal of communicating satisfaction, but could be contrived as boasting. Since the expression of emotion is one of the pragmatic functions, Rintell points out that those conventions constrain us from directly expressing emotion. She explains that politeness is the key issue in the appropriate use of the language, while in the case of emotional expressions, the range of strategies to adjust indirectness in the expression is very important for effective communication. Indirectness in emotional expression, particularly when people convey negative emotion through language, can be adjusted by minimizing the expression of those feelings. Thus, it is an important task for speakers to manipulate language so

as to control the level of directness with which emotion is expressed.

A recent study on the receptive ability of emotional expression was administered by Graham et al. (2001). They examined how well Japanese and Spanish native speakers learning English understood emotions expressed in utterances. The subjects listened to narrations recorded by actresses and actors. They were to judge which type of emotion was expressed among the eight choices. There was a significant difference between the native speakers' and non-native speakers' ability to judge speaker's emotion. They found that native Japanese speakers confused the paralinguistic cues of certain emotions like "anger", "hate", and "nervousness" in ways that native speakers of English rarely did.   Another interesting finding was that there was no correlation between proficiency level and the ability to judge emotions.   Graham et al. (2001) explained that this was because the acquisition of the ability to judge emotions is a slow process.   Additionally, the researchers presumed that because emotional expressions are not taught in most classrooms, the learners would not notice them even if they were exposed to them outside of the classroom.   Thus the learners could not utilize even those rare chances to notice the genuine input of emotional expressions. This is why the teaching of emotional expressions in the classroom is strongly advocated by the researchers.

The focus of Rintell's second paper (1989) was the production of emotional expressions in narratives by Arabic speakers learning English. She explored the following: 1) what are some of the discourse features and patterns found in language in which the emotion is conveyed or described? 2) how can the emotional expression of native speakers and learners be characterized and compared? The emotion categories studied in the study were anger, fear, fright, anxiety, depression, and guilt. Rintell concluded that while native speakers of English used various strategies to allow the listener to participate actively in the conversation and thus allow the listener to "read between the lines" and empathize with the speaker, the learners lacked these strategies.   Although linguistic strategies such as direct, minimized, and repeated statements of emotions were shared by the two groups, only native speakers used figurative language, reported speech, epithets and/or depersonalization.

The most recent study on the production of emotional expressions was reported by Dewaele and Pavlenko (2002).   Their study focused on the acquisition of emotion vocabulary by bilingual speakers. They were interested in the study of emotion vocabulary because "psycholinguistic studies also suggest that emotion words may be distinct from other abstract words on a number of characteristics and should be treated as a category separate from both concrete and abstract words" (265).   Thus, they presumed that emotion vocabulary might be subject to different constraints and usage from the rest of the lexicon in L2 learning.   In addition, they believed, it was plausible that the use of emotion words was related not only to socio-cultural factors, but also to individual experiences.   They demonstrated that, contrary to what Graham et al. (2001) found, the use of emotion words in interlanguage was linked to the learners' proficiency levels, type of linguistic material available, demeanor, and in some cases, the gender of the interlanguage speakers.

The above mentioned studies on receptive and productive ability for emotion vocabulary raise some interesting questions about the use of emotional expressions by second language learners.

However, before we start our investigation, we need to define the emotion vocabulary which will be studied in the present study.

3. Emotion vocabulary and the limit of the present study

Emotion is defined as "any of the strong feelings of the human spirit" in the Longman Dictionary of Contemporary English (1978). Thorndike Barnhart Beginning Dictionary (1972) also explains that "joy, grief, fear, hate, love, anger and excitement are emotions."

A limitation of the present study was that we focused only on negative emotional expressions. As has been stated in Rintell (1989), negative emotional expressions need more pragmatic consideration than positive emotional expressions. Negative ones are inevitably face-threatening and thus speakers need more pragmatic considerations and linguistic form devices to adjust the level of directness. Since we plan to use the Louvain International Database of Spoken English Interlanguage (LINDSEI) corpus data for the present study, it will not be possible for us to study phonological or super-segmental features which are not detected in the language forms. Thus in this paper, we would like to focus on the second language learner's negative emotional expressions, whose special features are easier to detect by using only transcribed data.

Review of the earlier studies on emotion vocabulary generated the following three research questions:

1) How do Japanese second-language learners use English negative emotion vocabulary? Is their usage different from that of other non-native speakers and native speakers of English?

2) What are the strategies employed by second-language learners and native speakers when these emotions are expressed? Is there any difference in the usage of the strategies among Japanese students, other non-native speakers of English, and native speakers of English?

3) Is there a correlation between the Japanese learners' English proficiency level and the frequency of negative emotion vocabulary or frequency of strategies to express negative emotions?

4. The study

4.1. Data & Subjects

The data for the present study consists of the following five corpora.

Chart 1: Data for the present study

Kinds of Corpus	Tokens	Types	Type/Token Ratio
LINSDEI Japanese sub-corpus (non-native turns)	38,767	2,702	6.97
LINDSEI Chinese sub-corpus (non-native turns)	62,811	3,484	5.55
LINDSEI French sub-corpus (non-native turns)	88,517	4,432	5.01
London Lund Corpus	1,789,044	24,807	1.38
Wellington Spoken Corpus (New Zealand)	1,101,190	25,711	2.33

In 1995, a complementary project of the International Corpus of Learner English (ICLE) project was launched at the University of Louvain in Belgium to compile a corpus of spoken learner language, the LINDSEI. The subjects are all advanced level (third/fourth year) university students. In the first part of the interview, the subjects freely chose a topic among the available four choices. The topics were: 1) an experience the subject had which taught her/him an important lesson, 2) a country the subject visited which impressed him/her, and 3) a film/play the subject watched which s/he believed was particularly good/bad. In the second half of the interview, the subjects were asked to make a story based on a sequence of pictures. The theme of the story revolves around a painter that was asked to paint a portrait of a lady, but the lady wasn't satisfied with the result and asked the painter to repaint it. In the end the lady was happy with her painting and proudly shared her painting with her friends.

4.2. Measure and Analysis

WordSmith tools were used to analyze the corpora. First all the vocabulary for negative emotions was retrieved from the three LINDSEI sub-corpora. The result showed that except for the words used for the emotion categories of anger, surprise, anxiety, and grief, only a few words were used in the corpus. For example, "hate" was the only word used to express the emotion of hate and was used just twice as a noun and three times as a verb in the Japanese sub-corpus. Considering the huge amount of total tokens in the data, we decided to check the frequency of each vocabulary word only when the total frequency of the emotional expressions of the target emotion category counted over 0.02 % of the total tokens in the present study. In this manner, ten words in four categories expressing negative emotions were chosen from the three LINDSEI sub-corpora as shown in Chart 2. Since all the words are adjectives, the emergence of each word was also categorized according to whether it was in predicative use or in attributive use.

Chart 2: A list of Vocabulary of Emotions Studied

Emotion Category	Vocabulary
Anger	angry
	awful
	terrible
Surprise	shocked
	surprised
	surprising
Anxiety	nervous
	worried
	afraid
Grief	sad

Next, only the vocabulary listed in the above chart was retrieved from LLC and WSC.   Thus it is possible that in the present study, the holistic view of the use of emotion vocabulary and strategies in the LLC and WSC can not be observed.   Since the focus of the present study is to look at how emotions are expressed by non-native speakers of English, the holistic feature of emotion vocabulary of native speakers of English will be studied at another time.

The strategies listed in Chart 3 were based on Rintell (1989).   As for the strategies employed in emotional expressions, an overview of the data of the three different groups of students demonstrated that only strategies No. 2 and No. 3 in the Chart were utilized.   The focus here was to find out what types of strategies were utilized by non-native speakers and whether there were any differences in their usage between native speakers of English and English learners.   Strategy No. 1 was added to the list only after we confirmed the concordance lines of the ten negative emotion words in the LLC and WSC. Strategy No. 1, the sentence structure strategy, was used only in those native speakers' corpora.   The purpose of including strategy No. 1 is to provide points of contrast between the strategies used by non-native speakers and native speakers.

Chart 3:   Categories of Emotional Expression Strategies Found in the LINDSEI, LLC, and WSC

Categories	Details
1. Sentence Structure	Exclamatory Sentence
	ex. oh how awful
2. Word Modifier	Intensifier
	ex. the woman is really angry
	Minimizer
	ex. she is a little bit nervous
3. Additional Word(s)	Repetition of the Emotion Word
	ex. he is terrible terrible
	Addition of "oh", "oh no"
	ex. oh it's surprising
	Addition of "God", "oh my God"
	ex. oh my God it was awful

Although the amount of data was not sufficient for statistical purposes, as we only had TOEFL scores for twenty-four Japanese subjects out of fifty-three in the corpus, we checked to confirm whether there was a correlation between the TOEFL scores and the range of emotional expressions or in the frequency of strategies used by the target subjects.   The two different views on the relationship between the learners' ability of emotional expressions and TOEFL scores led us to confirm this. Regarding this point, Grahan et al. (2001) concluded that the learners' ability to understand emotions did not improve as their target language proficiency improved, in contrast to Dewaele et al. (2002), who stated that the use of emotion words in interlanguage was linked to proficiency level as well as the type of research data, extroversion vs. introversion personality trait, and so forth.

4.3 Results

The following chart shows the summary of the use of emotional expressions.

Chart 4:   Frequency of Negative Emotion Vocabulary in Five Corpora

		Japanese 38767 tokens	Chinese 62811 tokens	French 88517 tokens	LLC 1789044 tokens	WSC 1101190 tokens
anger	angry	15	35	12	13	35
	awful	2	3	38	27	111
	terrible	3	5	3	18	99
	Sub-total	20(5.16)	43(6.85)	53(5.99)	58(0.32)	245(2.22)
surprise	shocked	3	1	3	1	10
	surprised	14	6	10	7	42
	surprising	0	1	4	1	13
	Sub-total	17(4.39)	8(1.27)	17(1.92)	9(0.05)	65(0.59)
anxiety	nervous	9	9	2	2	26
	worried	3	4	1	17	84
	afraid	2	8	23	5	28
	Sub-total	14(3.61)	21(3.34)	26(2.94)	24(0.13)	138(1.25)
grief	sad	1	13	24	12	64
	Sub-total	1(0.26)	13(2.07)	24(2.71)	12(0.07)	64(0.58)
Grand-Total		52(13.41)	85(13.53)	120(13.56)	103(0.58)	512(4.65)

Note) The numbers in the (   ) show the frequency per 10,000 words in the corpora.

Chart 5 is a summary of strategies in utilizing emotional expressions used in the five corpora.

Chart 5:   A Summary of Strategy Use in the Five Corpora

			Japanese	Chinese	French	LLC	WSC
Sentence Structure	Exclamatory Sentence					6	22
Modifiers	Intensifier	absolutely				1	
		awfully				1	
		bloody					1
		extremely		1			1
		god					1
		intensely				1	
		jolly				1	
		just				1	5
		(very) much			1	1	1
		overly					1
		pretty					10
		quite		1	11		24
		really	1	5	13	4	25
		terribly				1	
		so	4	4	4	4	13
		too		2	3	0	4
		unduly				1	
		very	11	34	11	8	15
	Minimizer	a bit			4	6	12

		a little	1	3			1
		rather		1			
		fairly					1
		a little bit	1	1			
		kind of	1				
		bits			1		
Additional	Repetition				3		3
Words	"Oh" "Oh no"				7	5	31
	"God" "Oh my God"				2	1	
Frequency of strategy use			19	52	60	42	171
Frequency of the target emotion			52	85	1207	103	512
Rate of strategy use			36.5%	61.2%	50.0%	41.1%	33.4%

Finally, Chart 6 shows the Pearson Product Moment Correlation coefficients between the TOEFL scores of the twenty-four Japanese subjects and their use of emotional expressions.

Chart 6:   Correlations Between TOEFL Scores and the Frequency of Emotional
Expressions and Strategies

	token	type	strategy
r with TOEFL	-0.23	-0.11	-0.02

N=24; p<0.01

5. Discussion

It was a surprise to see that the Japanese subjects were required to learn only a minimum of twelve emotion words while attending junior high school by the Education Ministry. We screened the emotion vocabulary listed in the seven most popular English textbooks used by the subjects during junior high school. This method allowed us to make lists of 32 adjectives, 15 set phrases, and 11 verbs that express emotions the subjects could have learned through the end of junior high school and beyond. Doubt concerning how much they could communicate, even if they could fully utilize those twelve words, was our first reaction when we checked the textbooks they had used. Nevertheless, considering the fact that the minimum total number of words required to be learned in junior high school at that time was 507 and that the minimum number of emotion vocabulary required was twelve (the ratio of emotion words to the entire targeted vocabulary was 2.37%), we can't argue that the range of emotion words taught at junior high school was extremely poor. On the contrary, the actual use of emotion words by Japanese subjects in the corpus (although we only focused on the four negative emotion categories in the present study) represents 0.13% of the token, while those of native speakers was between 0.01 to 0.05%. Although it is true that the context of the utterances greatly affects the range and frequency of the usage of emotion vocabulary, since the corpus is meant to reflect the natural distribution of various language forms, the two native speakers' corpora at least suggests that the rate of emotion words against the total number of words taught in Japanese junior high schools does not

seem to be too low.

First, we would like to answer the first research question: how do Japanese learners of English use emotion vocabulary in their second language?   The three LINDSEI corpora collected using the same procedure demonstrate an interesting comparison.   Japanese students used "surprise" more often than Chinese and French students.   On the other hand, the latter group of students used more "anger" and "grief" expressions.   Japanese students did not use the word "surprising" at all, while they used the word "surprised" very often.   As for the emotion of anxiety, Japanese students preferred "nervous" than "afraid", while the French students showed exactly the reversed tendency, Chinese students in between.

The big difference between the corpora by learners and by native speakers was that learners used only a few attributive uses of adjectives.   Among the ten 254 samples of negative emotion words studied in the present study, there were in total seventeen examples (6.7%) in the three learners' corpora; five examples of "sad" in Chinese corpus, and four examples of "awful" in French corpus and so forth, while in the native data, there were 125 examples (20.4%).   Including this phenomena, the range of expressions used by native speakers seems to be much wider than those of non-native speakers.   In particular, the New Zealand teenager corpus shows various combinations of verbs and emotive adjectives in predicative use.

The second research question concerns the strategy employed in expressing emotions.   The frequency of strategy usage among the Chinese students was the highest among the three learner corpora.   In twenty-three out of thirty-four cases, the Chinese students utilized the intensifier "very" with the phrase "be angry."   Only the French students seemed to prefer the term "really" to "very." In addition, the distribution of the strategies among French students is quite different from the other two groups.   Only the French group used the strategy of adding extra interjections (e.g., Oh no, God, and so forth) to intensify the meaning. This result may support the stereotypical observation that French students are more talkative than taciturn Asian students.   Interestingly enough, on the whole, the rate of strategy usage against the total frequency of emotional expressions by Chinese and French students eclipse those of Japanese students.   The rate of strategy usage by the Japanese students was roughly the same with that of the two groups of native speakers.   As Rintell (1989) suggested, native speakers often used minimizing strategies with negative emotional expressions.   The LLC confirms a minimizer frequency rate of 14.3% while this rate was only 8.2%, 9.6%, and 8.9% in the WSC, Chinese corpora, and French corpora respectively.   The fact that the frequency rate among the Japanese students at 15.8% which is nearly identical to the LLC's rate while the frequency rate among all the other non-native students was below 10% is an interesting finding.   If our presupposition that the English proficiency of the three groups of students is roughly equal is correct, the explanation for the Japanese students' overuse of minimizers seems to be linked to their preference for less face-threatening speech acts due to their cultural background.   Again, on the whole, the three groups of students used less variety of strategies than native speakers.

Our answer to the last research question is no.   Although the amount of data was not sufficient, neither tokens nor types of emotional expressions, nor those of supporting strategies demonstrate a

correlation with the TOEFL scores of the twenty-four Japanese students. This supports the finding by Graham et al. (2001). Although their study focused on the learners' receptive ability of emotional expressions, it is feasible that we can predict the same tendency in their productive ability because when the students did not understand certain emotional expressions, it was impossible for them to know how to express them. On the other hand, Dewaele and Pavlenko (2002) studied bilingual speakers' productive ability of emotional expressions. Naturally the proficiency level of the subjects must have been much higher than Graham et al.'s (2001) and the present study. Most of the Japanese students seemed to employ communication strategies, which were used to compensate for their lack of linguistic ability, rather than expressive strategies to intensify or minimize the emotional expressions. We definitely need a bigger base of subjects with a wider range of proficiency levels to make any conclusions about the correlation between these two factors, but we presume that the use of emotional expressions by learners must also be influenced by other factors, for example, the learners' target language proficiency, learner characteristics, culture, and so forth. We have to wait for additional research to answer these questions.

6. Conclusion

Based on this comparative study using the three non-native and two native speaker corpora on English negative emotional expressions, we reached the following conclusions:

1) The use of negative emotion vocabulary differed according to the learners' language background. Japanese students preferred less face-threatening expressions than the other non-native groups. The non-native students' usage of negative emotion vocabulary on the whole also differed from that of native-speakers'. The most noticeable point was that native speakers exploit varieties of expression including attributive uses of negative emotive adjectives.

2) Strategies used in expressing negative emotions also differed according to the learners' linguistic background. The Chinese and French students used different strategies more frequently than the Japanese students and native speakers, but out of the five groups the Japanese students used minimizers most frequently. The choice of strategy and the choice of actual wording in the strategies also varied according to the learners' linguistic background.

3) English proficiency level and the frequency of the usage of negative emotional expressions and supporting strategies do not seem to correlate in the present study. However, this finding was not conclusive as the amount of data available in the present study was limited.

Noticeably among the three non-native data sets, the Japanese data set included the narrowest range of negative emotional expressions and supporting strategies. Generally, Japanese culture avoids face-threatening expressions, and this fact may have limited the range of expressions utilized in accordance with their limited English proficiency. However, the results shown here have proven that Japanese students as well as the other non-native students do try to express emotions, in fact more frequently than native speakers of English. The difference seems to lie in how well they can use a variety of emotional expressions and their supporting strategies. Providing students with sufficient

exposure to emotional expressions and their supporting strategies should be one of the most important instructional goals to implement. Issues of the learners' cultural background and idiosyncrasies only comes after the learners have been immersed with an abundant array of input.

In expanding the present study, role of teaching emotional expressions in language acquisition and the ways those expressions are used in different modes will be good research topics in the future.

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