SKYPE-BASED ENGLISH ACTIVITIES: A CASE FOR COMPELLING INPUT?
CORRELATIONAL CHANGES BEFORE AND AFTER SKYPE EXCHANGES

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Abstract
This paper reports the results of a small, longitudinal study involving a group of Japanese elementary school students (N = 29) involved in exploratory research using foreign language activities, including two Skype exchanges between these students and students in Australia. The purpose of the research was to test for the impact of a series of Skype exchange activities with students in Australia on Japanese elementary school students’ affective variables toward EFL.

The results show that the students had statistically significant increases in foreign language activities, international posture, and motivation. This tech-based language activity arguably supplied compelling comprehensible input. The student participation in the preparations leading up to the exchanges would have encouraged them to work diligently to be able to speak so as to be understood. The results are discussed regarding future directions in this line of research.

Keywords: EFL, Skype, Japan, affect, motivation, international posture

1. Introduction
The purpose of this paper is to report the changes in the correlations amongst six affective variables of Japanese English as foreign language (JEFL) elementary school students (ESSs; N = 29) after a voice-over-internet-protocol (VOiP) Skype language exchange compared with the correlations before the exchanges. The students engaged in two Skype in-class foreign language activities (FLAs) designed to increase their affect toward EFL (Richards, 2012). The affective variables include motivation, international posture (IP; Yashima, 2002), willingness to communicate (WTC; McCroskey & Baer, 1985), and communicative confidence toward using English. Two other items on the survey instrument were FLAs and desire to travel overseas. The activities used Skype to communicate with a class of elementary school students in Australia. It is believed by the author and his colleagues that these technologies bring the real world into the classroom, and thereby influence students’ affect as a result of
exposing them to native speakers of English (NSEs). Furthermore, this method authentically involves the students themselves in the learning process, increasing autonomy and intrinsic motivation (Reeve & Halusic, 2009). It is speculated that technology-based FL exchanges create real-world encounters, provide compelling input (Krashen, 2011) leading to increased motivation, confidence, and FL WTC.

The paper begins with a review of the shift in EFL education motivation research from an integrative motivational orientation for EFL learners to an IP regarding English cultures and toward EFL learning; students' WTC; their self-perceived communicative competence / self-confidence; students desire to travel to foreign countries; and technology based FLAs with NSE which provide compelling input (Krashen, 2011). The results reported in this paper build on previous research results provided elsewhere (see Ockert, in press; Ockert & Tagami, 2014) and add to the literature by including the changes corroborated by Pearson’s correlation coefficients as a result of the Skype intervention.

2. Literature review

2.1. EFL motivation and international posture

Gardner and Lambert (1972) define the integrative motive as “a sincere and personal interest in the people and culture represented by the other group” (p. 132). They have explained that the integrative concept derives from a parallel they drew with processes of social identification underpinning first language acquisition (in Dörnyei & Ushioda, 2009).

Recently, the debate surrounding the integrative concept has grown. As a result, the concept has been re-thought, mainly prompted by the growing discussions of its applicability in applied linguistics due to the spread of English as a global language (aka ‘World Englishes’). Given the recent curricular inclusion of English as a basic skill to be taught from the primary school level in Japan (Dörnyei & Ushioda, 2009; MEXT, 2003), the questions arise whether the concept of integrative orientation can be applied in situations where there is no specific target reference group of speakers and whether the idea of an integrative motivational orientation for learning English has real meaning anymore.

For many learners, English symbolizes the world around Japan, something that connects them to foreign countries and foreigners with whom they can communicate by using English (Gudykunst & Kim, 1984). In the JEFL context, in which daily contact with native speakers of English remains infrequent if at all, learners are not likely to have a clear affective reaction to the specific L2 language group (Ushioda, 2006). However, student attitudes
toward American and other English-speaking cultures are surely created through education and exposure to foreign culture via various media.

To sum up, this identity with ‘foreignness’ possesses an international outlook and the attendant attitudes to different cultures and foreigners that are non-Japanese (Yashima, Zenuk-Nishide, & Shimizu, 2004). Furthermore, Carreira (2006) identified five factors influencing elementary age students’ affect regarding English, which included interest in foreign countries, intrinsic and extrinsic (instrumental) motivation, and anxiety. The results revealed “a rather steady developmental decline in intrinsic and extrinsic motivation” (p. 135). Carreira’s study suggests that the area of motivation can shed light on how the teaching methods for elementary school students in the higher grades can be improved.

2.2. Communicative confidence

MacIntyre and his associates (MacIntyre, 1994; MacIntyre & MacDonald, 1998; MacIntyre & Charos, 1996) have identified a concept which they have labeled ‘perceived communicative competence’. They emphasize that it is the learner's perception of their own communicative competence that influences their WTC (see Clément, Baker, & MacIntyre, 2003).

In her study on Japanese in an ESL learning situation, Hashimoto (2002) argued that self-perceived competence and self-confidence in an L2 are, in fact, the same construct (“perceived competence or self-confidence in an L2”, p. 57). In her research involving Japanese university students studying in Hawaii, she used the same item statements as those used by MacIntyre and Charos (1996). Therefore, how the reader chooses to interpret these terms remains relative as the latent construct revealed as a result of the investigation is the same in both studies.

In the Japanese JEFL context, Yashima (2002) found a positive, causal relationship between motivation and communication confidence (comprised of communication anxiety (aka nervousness) and perceived communication competence) in the L2, which led to WTC. In addition, Yashima (2004) found that “self-confidence in communication in an L2 is crucial for a person to be willing to communicate in that L2” (p. 141). Therefore, activities that promote self-confidence are essential to L2 development. Yashima and her colleagues have more recently conducted research on the relationships among motivation, psychological needs, FL WTC, and Can-Do statements of English language learning of non-English-major junior college students in Japan (Nakahira, Yashima & Maekawa, 2010). The results show “that L2 learning motivation leads to confidence in L2 communication which is a
combination of anxiety and competence” (p. 46). Therefore, as stated above, (self-perceived) competence plus (low) anxiety equals confidence.

2.3. Willingness to communicate
McCroskey and Baer (1985) were the first to research and report on a construct that they have identified and named ‘willingness to communicate’ (WTC). WTC captures the major implications that affective variables such as anomie, communication apprehension, introversion, reticence, self-esteem and shyness have in regards to their influence on communicative behavior (McCroskey & Richmond, 1991).

In his research, MacIntyre (1994) speculated that L2 WTC is based on a combination of perceived communicative competence and a low level of communication anxiety. Other studies have shown that WTC was a predictor of frequency of communication in the L2. Motivation was a predictor of WTC and frequency of communication (MacIntyre & Charos, 1996).

Yashima and her associates have conducted research on affect in the JEFL context on WTC (Yashima, 2002); the influence of attitudes and affect on WTC and L2 communication (Yashima et al., 2004); and the interplay of classroom anxiety and intrinsic motivation (Yashima et al., 2009). Yashima et al. (2004) have called for “Studies...to be carried out with programs that offer students increased opportunities in L2 communication” (p. 126). The research project results reported in this paper are an example of the type of intervention that offers an authentic opportunity to communicate in these students’ L2.

In her 2002 study, Yashima found a positive, causal relationship between a latent variable, motivation (which was comprised of two indicator variables, desire and intensity), and the latent variable communication confidence (comprised of two indicator variables - communication anxiety, aka nervousness, and perceived communication competence) in the L2, which led to WTC. In addition, Yashima (2004) found that “self-confidence in communication in an L2 is crucial for a person to be willing to communicate in that L2” (p. 141). The role of confidence as a predictor variable for WTC has also been found by Hashimoto (2002) as well as by Yashima et al. (2004).

2.4. CMC and the desire to travel overseas
Research on L2 language learners’ desire to travel abroad was first reported by Clément and his associates (see Clément & Krudenier, 1983; Clément, Dörnyei, & Noels, 1994; Noels, Pelletier, Clément, & Vallerand, 2000). In their research, they have reported on the desire to
travel overseas and the desire to make friends with members of an L2 target community as motives to study EFL. For example, Clément and Kruidenier (1983) investigated the reasons for learning second and foreign languages by various groups of learners based on the degree of multiculturalism of their environments. Based on Clément and Kruidenier's work, Dörrnyei (1990) contended that L2 learning in a classroom situation could not actually involve attitudes toward an L2 community, as the learners have little or no contact with members of an L2 community. In addition, students’ desire to spend time abroad has been shown to be related to instrumental motives (e.g. future employment) and socio-cultural motives (such as a desire to make friends – Clément, Dörrnyei, & Noels, 1994).

In CMC studies, Kramsch and Andersen (1999) have commented that computers and the Internet seem to realize the dream of every language teacher – to bring the language and culture as close and as authentically as possible to students in the classroom. Guarda (2012) has written that “what distinguishes telecollaboration from other NBLT activities is the specificity of its purposes: although language development remains at the core, telecollaboration is oriented towards intercultural learning, with the specific goal of helping participants develop and manifest intercultural communicative competence” (p. 20). She reports that “scholars and practitioners have highlighted how CMC can foster authenticity by bringing learners into contact with an authentic audience and by empowering them to interact on topics that are relevant to their own lives (e.g. Kramsch et al., 2000; Hanna & De Nooy, 2003)” (in Guarda, 2012, p. 21).

2.5. Technology-based FLAs

Motivation research demonstrates that young people – and especially children - are inherently motivated to be active in almost any situation and enjoy hands-on activities (see Amibile, 1989). In addition, “research results demonstrate that students are more interested in living the language than merely using it in a classroom setting” (Ockert, 2006, p. 336) such as traditional, teacher-fronted lessons in which the language is merely translated, listened to or repeated. These results are in line with Willis, who describes task-based activities as “activities where the target language is used by the learner for a communicative purpose in order to achieve an outcome” (Willis, 1996, p. 23). Recognizing the significance of tasks in shaping learners’ interest and enthusiasm coincides with teachers’ perceptions: the quality of the activities used and the way they are presented makes a difference in students’ attitudes toward learning. As Noels et al. (1999) have noted, “[w]ith its potential to be developed and maintained by the social environment, motivation is one element that educators can develop
to improve their students’ L2 outcomes” (p. 31). The social environment of the foreign language classroom can be developed to enhance motivation and, therefore, improve self-confidence (Clément, Dörnyei, & Noels, 1994), which should lead to an increase in WTC.

Research conducted in EFL environments has shown that a combination of a learner’s personality (trait motivation) and situation-specific factors (state motivation) contribute to FL motivation (Julkunen, 2001). These, in turn, influence the learner’s perception of a specific task. In other words, task motivation depends on the general motivation of the learner combined with how they perceive the task. Julkunen (2001) has written that four factors influence task motivation: interest, relevance, expectancy, and outcome. Furthermore, Robinson and Gilabert (2007) have reported on the cognitive underpinnings of task-based learning. Their survey of the research shows that the psychology of the learner and the perceived complexity of the task influence the cognitive demands placed on the learner.

In the Japanese EFL context, Takiguchi (2002) conducted a research project which tested for changes in affective variables of Japanese elementary students. The results show that real-time, in-class communication with students in foreign countries using VoIP software (Skype or Gizmo) improved student interest, concern, and desire (motivation) to study English. Tagami (2011) used Skype for real-time communication exchanges with elementary students in Australia. His research results led him to believe that the exchanges helped his students realize that English is a necessary means to communicate with members of a different culture. In addition, the activities were designed to allow the students a structured, yet autonomous, experience (Jang, Reeve, & Deci, 2010), which helped improve their WTC and motivation (Tagami, 2011).

2.6. Compelling input

Krashen (2011) has stated that "[i]t is by now well-established that input must be comprehensible to have an effect on language acquisition and literacy development. To make sure that language acquirers pay attention to the input, it should be interesting” (p. 1). However, he also argues that interest alone is not sufficient for optimal language acquisition. Perhaps this is because the input “needs to be not just interesting but compelling. Compelling means that the input is so interesting you forget that it is in another language” (p. 1). This would require that the learner be in what Csikszentmihalyi (1990) has called a state of flow. In flow, the concerns of everyday life and even the sense of self disappear - our sense of time is altered and nothing but the activity itself seems to matter. Can the same be said for being "lost in the moment" for verbal communication?
Compelling input appears to eliminate the need for motivation, a conscious desire to improve. When you get compelling input, you acquire language whether you are interested in improving or not. The evidence for the Compelling Input Hypothesis includes improvement as an unexpected result, the many cases of those who had no conscious intention of improving in another language or increasing their literacy, but simply got very interested in reading. In fact, they were sometimes surprised that they had improved (Krashen, 2011).

It may be argued that this technology-based communication exchange provided compelling comprehensible input (Krashen, 2011), since the participants are, in a way, “watching compelling movies and having conversations with truly fascinating people” (p. 1). Research results (Tagami, 2011; Takiguchi, 2002) have shown statistically significant increases in affect amongst experimental group members who engaged in Skype exchange FLAs. Furthermore, Tagami (2010) and Takiguchi (2002) have conducted research on ESSs affect toward EFL. Their results show that they, too, have a strong desire to travel overseas. Furthermore, after these students were exposed to EFL via a video exchange (Tagami, 2011b), the students expressed a strong desire to go abroad in order to make friends as a result of the intervention.

However, none of the previously mentioned studies has examined changes in the correlation matrix amongst affective variables. Therefore, by comparing the affective variable correlation matrices before and after the Skype exchanges, we can examine circumstances where the correlations were either strengthened or weakened. As a result of any positive changes, it may be argued that the Skype exchanges may be a source ‘compelling input’ for the students.

3. The study
The affective variables examined in this study are: desire to engage in foreign language activities, IP, motivation, communicative confidence, WTC, and desire to visit foreign countries. The specific objectives of this study are as follows:

1. To determine the level of the six affective variables (\(M\) and \(SD\)) among Japanese elementary EFL students and the correlations between the variables.

2. To examine the changes among the six variables (\(M\) and \(SD\)) and the changes among the correlations after the Skype exchange activities.

3.1. Research questions and hypotheses
The study attempts to answer the following research questions:
1. What is the level of the six affective variables among Japanese elementary students toward EFL?
2. What are the changes, if any, on the level of the six affective variables (\(M\) and \(SD\)) among these Japanese elementary students toward EFL?
3. What are the changes, if any, among the correlations among the six affective variables of these Japanese elementary students toward EFL after the Skype exchanges?
4. What can be hypothesized regarding any changes on the \(M\) and \(SD\), and the correlations after the Skype exchanges?

The two hypotheses tested specifically in the current study were as follows:
1. The students will show a desire to learn English (motivation) and interest in foreign language activities. The mean scores can answer this hypothesis.
2. There will be strong correlations between WTC, IP, FLAs, and motivation.

3.2. Participants
Twenty-nine 5th grade elementary school students participated in the study (\(N = 29\)). The students were all either ten or eleven years of age. They were all native Japanese in the same school in Nagano prefecture, Japan.

3.3. Instrumentation and procedure
The research project used a self-report measure administered in Japanese. The instrument used a six-point Likert-type scale from 1 (Completely Disagree) to 6 (Completely Agree). There were six questions, one each on foreign language activities; foreign countries / different cultures; desire to communicate in English; confidence to communicate in English; desire to communicate with foreigners in English; and, traveling abroad (see Appendix). The Cronbach’s \(\alpha\) reliability estimate is .88.

The survey was administered in class to the students before the Skype exchanges in April and again in December after the Skype exchanges. During the intervening months, the students participated in three technology-based FLAs with students living abroad. The first took place on July 21. At this time the students were able to introduce themselves. The second and third MCMC exchanges took place for approximately thirty minutes each on November 1st and 2nd respectively. The November 1st, 2010 exchange was for approximately 30 minutes. Activities included the “Hokey-Pokey”, “Duck, Duck, Goose” and “Indian and Tipi”. The students used photos and video to explain that Cricket became the basis of baseball. Also, the
Australian students explained Australian football, food such as meat pies, and the different character names from the Pokemon series. The November 2 exchange also lasted for about 30 minutes. After an initially greeting of the students, there was a greeting by the entire class. Then the students sang songs together. A final thirty-minute exchange took place on December 2nd for about 30 minutes. From the Australian side this time, there was a presentation of a Japanese greeting song to the tune of “Are you sleeping?” This time, there was also a simple Yes / No Q&A session. Example questions such as Do you like school? were answered immediately, Yes, I do. Do you have pets? And answered, No, I do not. Also, Do you have pets? received the answer Yes, I have a dog.

The survey was in paper form and in Japanese. The data was put to a correlation analysis using the SPSS (v20) statistical software. The significance level was set to .05 for all of the items. Significance levels of \( p < .05 \) and \( p < .01 \) are indicated in the tables.

### 3.4. Results and discussion

The descriptive statistics of the students before and after the Skype exchange are shown in Table 1. There are several large and statistically significant differences. In particular, the increases for FLAs and motivation are statistically significant at \( p < .01 \) and very close to a full point increase. For IP, the results show an increase greater than a full point \( (1.17; p < .01) \). This indicates that the impact of the Skype exchange may strengthen IP in Japanese elementary age students.

<table>
<thead>
<tr>
<th>FL Activities</th>
<th>M</th>
<th>SD</th>
<th>FLAs</th>
<th>IP</th>
<th>Mot.</th>
<th>Com.</th>
<th>Conf.</th>
<th>WTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Posture</td>
<td>3.14</td>
<td>1.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>3.17</td>
<td>1.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comm. Confidence</td>
<td>3.45</td>
<td>1.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WTC</td>
<td>3.34</td>
<td>1.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desire to Travel Overseas</td>
<td>4.45</td>
<td>1.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Note. \( *p < .01 \)

The correlation analysis results for the pre-intervention data are presented in Table 1. As can be seen, there are a number of rather high correlations between several of the
variables. First, the correlation between the FLAs and motivation is .77, indicating a strong relationship. This means that any FLA should have a positive influence on motivation and vice versa. The same can be said for the relationship between motivation and IP, since the correlation between them is .75. Furthermore, the highest correlation between motivation and WTC (0.83) is much higher than that reported in several of the previous research studies reviewed for this paper (e.g. Yashima et al., 2004).

The correlations for the post-intervention data are presented in Table 2. The correlations between FLAs and IP, communicative confidence, and desire to travel overseas increased. Also, an unexpected result is the increase in the correlations between communicative confidence and all five of the other affective variables. This is interesting since communicative confidence showed a slight decrease after the Skype exchange.

Table 2. The Post-Intervention Descriptive Statistics and Correlation Matrix (N = 29).

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>FLAs</th>
<th>IP</th>
<th>Mot.</th>
<th>Com. Conf.</th>
<th>WTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL Activities</td>
<td>4.10</td>
<td>1.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Posture</td>
<td>4.48</td>
<td>1.10</td>
<td>0.448*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>4.10</td>
<td>1.16</td>
<td>0.742*</td>
<td>0.340*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comm. Confidence</td>
<td>3.41</td>
<td>1.38</td>
<td>0.537*</td>
<td>0.368*</td>
<td>0.450*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WTC</td>
<td>3.90</td>
<td>1.24</td>
<td>0.633*</td>
<td>0.566*</td>
<td>0.609*</td>
<td>0.469*</td>
<td></td>
</tr>
<tr>
<td>Desire to Travel Overseas</td>
<td>5.07</td>
<td>1.14</td>
<td>0.491*</td>
<td>0.466*</td>
<td>0.596*</td>
<td>0.289</td>
<td>0.564*</td>
</tr>
</tbody>
</table>

Note. *p < .01

There are several positive and statistically significant differences between the M scores before and after the interventions. For example, the FLA increase by .96 points (p < .01); IP increased by 1.17 (p < .01); Motivation had an increase of .93 (p < .01); and Desire to Travel Overseas by .62 (p < .05); WTC had an increase of .56, although this did not reach the threshold of statistical significance. An interesting result was the slight decrease of 0.04 for Communicative Confidence.

4. Conclusions

These results support previous research which showed strong correlations between affective variables (Ockert & Tagami, 2014; Tagami, 2011). These results are of interest to not only elementary school teachers but teachers of second languages in general. In essence, the use of
classroom time to prepare for and participate in a Skype exchange with students of the target language who are living abroad will in itself motivate students to practice the target language so as to be understood. Second, and perhaps most importantly, the desire to comprehend what is being said during the exchange is almost certainly a source of compelling input (Krashen, 2011). In other words, the anticipation leading up to the event and the actual participation in the exchange may provide compelling input (Krashen, 2011).

Therefore, the statistically significant increases in affect are likely due to the anticipation of communicating with significant others (the students living abroad) and the uniqueness of the experience, which combined could provide compelling comprehensible input (Krashen, 2011). The uses of recent technological advances such as the Internet provide an interesting alternative to traditional educational approaches. The use of technology-based FLAs would help maintain student interest and educators are encouraged to include them in their curricula. As MEXT (2003) desires, “[t]o develop students’ basic communication abilities such as listening, speaking, reading and writing, deepening their understanding of language and culture and fostering a positive attitude toward communication through foreign languages” (p. 1).

The research results presented herein may help educators better understand the impact of tech-based language exchange activities on students’ affect and attitudes toward English language learning. It is by no means any attempt to replace classroom teachers with any sort of technology-based program. On the contrary, the Skype exchanges occurred during class time with the presence of their teacher, not in lieu of class time with a teacher. Future studies which explore, specifically, the amount of compelling comprehensible input (Krashen, 2011) received via the exchange(s) would add considerably to this line of research. An area of research could be the desire of the students to communicate in English. This desire may be comprised of both anticipation of the event / material and interest in the activity itself, be it verbal or written input, such as in a letter exchange (Tagami, 2010). A future paper will examine the student interest in the Skype exchanges by analyzing qualitatively the student responses regarding their attitudes toward and feelings about the Skype exchanges.

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**Appendix**

English translation of the questionnaire items using a six-point Likert-type scale from 1 (*Completely Disagree*) to 6 (*Completely Agree*).

1. I like foreign language (English) activities.
2. I want to know more about foreign countries (different cultures).
3. To communicate in English, I want to study more.
4. I have confidence to communicate using simple English.
5. For myself, I want to communicate with foreigners in English.
6. I want to go overseas at some time.