Increases in Japanese EFL Learners’ Motivation, International Posture, and Interest in Foreign Language Activities after Skype Exchanges

David Ockert

Toyo University, Japan

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Abstract: This paper reports the survey results of a group of students at an elementary school in Japan, who engaged in a computer mediated communication exchange with native speaker of English elementary school students in Australia. The schools collaborated to provide the students an opportunity to introduce each other and conduct various activities using Skype. The self-report measure was administered to an experimental and control group before and after the Skype exchange. The results show that the experimental group had statistically significant increases in their desire to engage in foreign language activities ($p < .01$); international posture ($p < .01$), motivation ($p < .01$), and desire to visit foreign countries ($p < .05$). In addition, the Glass’ $\Delta$ effect size measures for the experimental group are: Foreign language activities = .83; International Posture =1.06; Motivation = .80; and Desire to visit foreign countries = .54. These results are very encouraging. The efficacy of including multimodal computer mediated communication exchanges in foreign language learning contexts is discussed.

Keywords: Affect; CALL; computer mediated communication; international posture; motivation; multimodal; willingness to communicate

Introduction

In the Japanese EFL (JEFL) context, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) strives to improve students’ communication skills, including listening, speaking, reading and writing. At the level of primary school education, MEXT also hopes to deepen their understanding of FL and foreign cultures in order to develop a positive attitude toward communication through FL activities (MEXT, 2003). This paper begins with a review the shift in EFL education from an integrative motivational orientation for English learning to an international posture regarding English as a part of learners' global outlook. Next, previous research studies on student affect are examined. These include: computer mediated communication (CMC) based foreign language activities (FLAs), student international posture (IP; Yashima, 2002), willingness to communicate (WTC; McCroskey & Baer, 1985), self-perceived communicative competence, students' motivation toward EFL, and student desire to travel overseas. As affect is crucial to L2 learning (see Richards, 2012), the changes of these six variables are explored. In order to do so, the students ($N = 58$) reported via a self-report instrument. This paper concludes by appealing to curriculum designers and teachers in general to consider the results with the understanding that this research project has a variety of purposes. One of the most important of which is the broadening of our students' horizons via English language learning and thereby help them become global citizens (Lamb, 2004; Ushioda, 2006; Ushioda & Dörnyei, 2012; Yashima, 2002). The use of available technologies to communicate with students in another country is an enjoyable and low-cost means to attain this goal.

More specifically, this paper reports on an examination of the effects of multimodal CMC (MCMC) use in a Japanese elementary school English as a foreign language environment. The results of a class of Japanese school students ($n = 29$) who used the
Skype video software to communicate with a group of elementary school students in Australia on three separate occasions. These results are presented in comparison with a control group, the members of which had no Skype intervention \( (n = 29) \). In doing so, this paper builds on previously reported research (Ockert, 2014, 2015; Ockert & Tagami, 2014; Tagami, 2011a, 2011b). MCMC allows classroom teachers to bring the real world into the classroom, which broadens the students’ horizons by exposing them to native speakers of English (NSEs) from another country – promoting an IP in the students. Furthermore, this method authentically involves the students themselves in the learning process, increasing autonomy and intrinsic motivation (Reeve & Halusic, 2009). The research results presented herein show high correlations between motivation, IP, and the WTC of elementary Japanese students studying English. Educators benefit by realizing that this group of students really enjoyed the language exchange experience using Skype, which resulted in an increase of several affective variables when compared with a control group. It is hypothesized that live language exchanges via Skype create a valid replication of a real-world, face-to-face language exchange, resulting in a heightened L2 self-image (Dörnyei, 2009), and an increase in student affect toward EFL learning.

**Affective variables in the JEFL context**

*The introduction of international posture in EFL research*

In the field of L2 motivation, the integrative orientation is by far the most researched theoretical concept to date (Crookes & Schmidt, 1991). As defined by Gardner and Lambert (1972), the integrative orientation reflects “a sincere and personal interest in the people and culture represented by the other group” (p. 132). Gardner and Lambert (1972; Gardner, 1985) 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 larger. For example, in an EFL setting, there is no immediate group of L2 speakers into which a learner can integrate. Therefore, is the notion of integrativeness applicable any longer? Many researchers are beginning to investigate this very question (e.g. Ushioda, 2006). 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. Especially 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), can the concept of integrative orientation be applied in situations where there is no specific target reference group of speakers? Does the idea of an integrative motivational orientation for learning English have real meaning anymore?

For EFL learners, the English language often symbolizes the world around them, something that connects them to foreign countries and foreigners with whom they can communicate by using English (Gudykunst & Kim, 1984). Since the JEFL context is such that 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). For example, as Ushioda (2006) noted, since English is spoken by members of a global community, the question arises whether it is appropriate to conceptualize its members as an external reference group, or as part of one’s internal representation of oneself as a de facto member of that global community. It is this theoretical shift of focus to the “internal domain of self and identity that marks the most radical rethinking of the integrative concept” (p. 150).

Within the JEFL context, for example, Yashima (2000) found that English seems to represent something broader than people from the US or Britain in the minds of young Japanese learners. As a result of her research, she expanded on the definition of ‘integrativeness’ (Gardner, 1985) to refer to a generalized international outlook or posture
(IP). She defines IP as an “interest in foreign or international affairs, willingness to go overseas to stay or work, readiness to interact with intercultural partners, and...openness or a non-ethnocentric attitude toward different cultures” (p. 57). As an expansion of the integrative concept, IP tries to catch the learner’s attitude toward the world and interest(s) toward the world outside Japan. Working with colleagues (see Yashima et al, 2004), she has been able to define IP operationally. Therefore, this identity with ‘foreignness’ possesses an international outlook and the attendant attitudes to different cultures and foreigners that are non-Japanese (Yashima et al., 2004). Within the JEFL context, this work has been the basis for examining the relationships among IP, L2 learning motivation, L2 proficiency, and L2 communication confidence in an L2. Thus, the IP concept broadens the idea of integrativeness into a more global framework. Within this framework, L2 learners develop a desire to communicate with speakers of English, yet not necessarily integrate with them. Instead, they have a ‘cross-cultural intention’. Adachi (2009) defines ‘cross-cultural intention’ as the concept of the community in countries that used English and sympathy and understanding toward the culture of English speakers. In her research, she found a relationship between motivation and the cross-cultural intention of students.

Motivation and young L2 learners
Regarding children, Amabile (1989) believes that intrinsic motivation has four parts: 1) having love for and even an obsession with the task at hand, 2) a sense of dedication to the work over time, 3) a view of the project as combining work and play, and 4) concentration on the activity itself. Her research gives us an even deeper understanding of how persons who are intrinsically motivated feel when engaged in a task. They see the activity as both work and play, and they have a love for the task at hand.

Self-determination theory (SDT; Deci & Ryan, 1985) has been used in a variety of fields over the past twenty five years with consistent results. Within the field of education, much of the research has consistently pointed to the importance of motivation from within (Deci & Flaste, 1996; Jang, Reeve & Deci, 2010; Reeve & Halusic, 2009), whether defined in terms of intrinsic or integrative motivation (as opposed to an extrinsic or instrumental motivation). This 'motivation from within’ is believed to sustain the learning process more effectively than motivation that is externally regulated or controlled by the teacher and the research evidence thus far supports this view (e.g. Pintrich & Schunk, 2002; Ryan & Deci, 2000; 2002), and the message for educators clearly shows that in order to help our students, we need to find ways of finding, supporting and maintaining students’ own motivation to learn (Ushioda, 2006).

Motivation is certainly one of the main dimensions on which research in CMC has focused since its origins (for an overview, see Stockwell, 2013). Researchers have reported on increased motivation as a result of CMC in several studies (e.g. Wu, Marek & Yen, 2012). There are various reasons, including the result of exposure to stimulating and authentic learning contexts (Kern, 1996; Thorne, 2008), of collaborative work in a less-threatening environment (Beauvois, 1998; Friermouth & Jarrell, 2006), and of learners’ perceived feeling of having control over their own learning (Warschauer, 1996). Within the JEFL context, utilizing activities that get young students physically active in the learning process are encouraged (MEXT, 2003;Ockert, 2010). This aspect of CMC motivation will be explored in more detail below and are the basis for the exchange activities used in this study.

L2 self-confidence and self-perceived communicative competence
MacIntyre and his associates (Donovan & MacIntyre, 2005; MacIntyre, 1994; MacIntyre & MacDonald, 1998; MacIntyre & Charos, 1996; MacIntyre, Clément, Dörnyei, & Noels, 1998) identified a concept which they have labeled ‘perceived communicative
competence'. This competency influences the communicative process of how people influence each other verbally / aurally and / or with symbols (such as writing systems) and therefore, visually through the interpretation of those symbols or words. How a learner perceives their ability to communicate will be influenced by how well they have mastered each of the above skills.

In EFL studies, Yashima (2002) found a positive, causal relationship between motivation (which was comprised of two indicator variables, desire and intensity) and 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 et al. (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). In addition, Matsuoka’s (2005) results indicate that while WTC and proficiency are not correlated, confidence may predict English proficiency amongst Japanese college students. As mentioned above, research has shown that tech-based interventions can have a positive impact on WTC, via confidence (Ockert, 2013, 2014).

The research presented in this section supports the idea that student confidence toward language use and proficiency are intimately related. Therefore, researchers have hypothesized “that anxiety and, by extension, self-confidence in the L2 classroom are intimately linked to classroom processes” (Clément, Dörnyei, & Noels, 1994, p. 423). What, specifically, can educators do in the classroom to actively involve their students in the classroom processes to improve self-confidence? Guarda (2012) wrote how telecollaboration between learners of different backgrounds includes “the specific goal of helping participants develop and manifest intercultural communicative competence” (p. 20). An MCMC study by Wu, Marek, and Yen (2012), in which the participants interacted “live” via the Internet with a native English speaker, found that student confidence and performance improved as a result of the exchange. The research presented in this paper explores to what extent in-class language exchanges via Skype have on student affective variables, including self-perceived communicative competence in EFL.

Willingness to communicate
An issue that can affect students’ classroom participation is their willingness to attempt to use English in the classroom (i.e. WTC; McCroskey & Baer, 1985). In L1 studies, McCroskey and his associates have researched and reported extensively on this construct (McCroskey, 1992; McCroskey & Richmond, 1987; 1991). 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 L2 studies on WTC, MacIntyre (1994) developed a path model speculating that in L2 communication, WTC is based on a combination of perceived communicative competence and a low level of communication anxiety. As L2 communication contexts contain several “inter-group issues, social and political implications” (MacIntyre & MacDonald, 1998, p. 546), WTC in the L2 is not regarded as a simple manifestation of L1 WTC, which is believed to be more of a personality trait. Therefore, MacIntyre’s (1994) model proposes that perceived competence and anxiety affect WTC separately. MacIntyre and Clément (1996) showed that motivation influenced WTC in the L2, which, in turn, resulted in increased frequency of L2 communication. In studies conducted in other contexts, WTC was a predictor of frequency of communication in the L2, while motivation was a predictor of WTC and/or frequency of communication (MacIntyre & Charos, 1996; MacIntyre & Clément, 1996). Furthermore, Clément, Baker and MacIntyre (2003) have shown that WTC in an L2 is influenced by the learning situation and social norms of the learners.
In later L2 studies, MacIntyre (2007) and Peng and Woodrow (2010), revealed that WTC is linked to variables such as personality, self-confidence, attitudes, and motivation, and is linked to anxiety as well as learners’ views of their own communicative competence. According to Peng and Woodrow (2010), it is “learners who have higher perceptions of their communication competence and experience a lower level of communication anxiety tend to be more willing to initiate communication” (p. 836). However other situational factors are also involved, such as topic, task, group size, and cultural background (Cao, 2011). For example, in some cultures, students may be more willing to communicate in front of their peers in the classroom than in other cultures. Wen and Clément (2003) suggest that in China, group cohesiveness and attachment to group members influence Chinese students’ WTC in the classroom. A student may believe that if he or she speaks up in class this may not be valued by other students since it is judged as ‘showing off’ and an attempt to make other students look weak. Teachers in Japan frequently express the difficulty of getting students to communicate in English in front of their peers (see Dwyer & Heller-Murphy, 1996; Jones, 1999).

Yashima and her associates (Yashima, 2000, 2002; Yashima et al., 2004; Yashima et al., 2009) have conducted research on WTC in the JEFL context in relation to several affective variables. For example, language learning orientations and motivations of Japanese college students (Yashima, 2000), student willingness to communicate (Yashima, 2002), the influence of attitudes and affect on willingness to communicate and second language communication (Yashima et al., 2004) and the interplay of classroom anxiety, intrinsic motivation, and gender (Yashima et al., 2009). Yashima et al. (2004) demonstrated that by combining the two models of Clément and Kruidenier (1985) and MacIntyre and Clément (1996) that L2 self-confidence leads to L2 WTC. They concluded that “self-confidence in communication in an L2 is crucial for a person to be willing to communicate in that L2” (p. 141).

Additional research on WTC in the JEFL environment by Matsuoka (2005) confirms several of the above results. Her study used structural equation modeling (SEM) and multiple regression analysis which showed that motivational intensity, communication apprehension and IP were significant predictors of L2 WTC. This led to the conclusion that perceived competence and L2 WTC were both predictors of L2 proficiency. Therefore, foreign language activities (FLAs) that promote perceived competence (aka self-confidence) in an L2 would almost certainly increase both WTC and L2 proficiency. Recent research results support this theory. For example, Ockert (2013, 2014) and Tagami (2011a, 2011b) reported that tech-based interventions positively influence student confidence toward EFL communication.

**Desire to travel overseas**

The desire to travel overseas and the desire to make friends with members of an L2 target community have been reported by Clément and his associates (see Clément & Kruidenier, 1985; Clément, Dörnyei, & Noels, 1994; Noels, Pelletier, Clément, & Vallerand, 2000). Clément and Kruidenier (1985) investigated the endorsement of reasons for learning second and foreign languages by various groups of learners differing in the degree of multiculturalism of their environments. Most of the groups studied with Clément and Kruidenier’s (1985) approach had at least a minimal amount of extracurricular contact with members of the target language group. Expanding on Clément and Kruidenier’s work, Dörnyei (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. Furthermore, 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, Dörnyei, & Noels, 1994).

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Kramsch and Andersen (1999) 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. Furthermore, Guarda (2012) stated that CMC collaboration between members of different cultures includes intercultural learning. She reported that researchers and classroom practitioners point out that CMC fosters authenticity as it brings the students into contact with an authentic audience, which, in turn, empowers them to introduce and communicate on personally relevant topics. Particularly relevant to the present study, Tagami’s (2010) research demonstrated that EFL ESSs, too, have a strong desire to travel overseas. Furthermore, after these students were exposed to EFL via a video exchange, the students expressed a strong desire to go abroad in order to make friends (Tagami, 2011b).

MCMC cross-cultural EFL studies

Kress and van Leeuwen (2001) have defined multimodality as “the use of several semiotic modes in the design of a semiotic product or event, together with the particular way in which these modes are combined” (p. 20). In other words, the use of signs, symbols, facial expressions, words, body language, etc. are combined to produce comprehension in an interlocutor. For example, Meskill (1999) has reported that the use of multiple modalities (sight, sound, tactile, aural) contributes positively to language learning. In CALL research, MCMC L2 and EFL activities have received the attention of theorists and researchers (Felix; 2005; Hoven, 2006; Hsu, 2005; Lamy, 2012; Lamy & Flewitt, 2011). More specifically, research has demonstrated the positive effects of CMC on affective variables such as anxiety (see de los Arcos, Coleman & Hempel, 2009). In addition, in their small-scale study on WTC in EFL in an online game, Reinders and Wattana (2011) found that student WTC increased over time. In other words, exposure to EFL in a virtual environment was shown to have a positive influence on student FL WTC.

Hsu (2005) has reported on how the building of language-learning environments to help technological university students develop more independent attitudes toward learning English, Lan, Sung, and Chang (2006) have shown how collaborative early EFL reading among distributed learners benefits both groups of learners. Hampel and Hauck (2006) conducted research on multimodal virtual learning spaces which has contributed greatly to our understanding of how to incorporate CALL / CMC-based communication media into the classroom (see also Hoven, 2006; Lamy, 2012). Hampel and Hauck (2006) explored how persons communicate in order to construct meaning in MCMC contexts. Their research on (M)CMC-base language teaching and learning using multimodal communication via Internet-based audio-graphic conferencing confirmed what Meskill (1999) previously reported: “the engagement of multiple modalities (sight, sound, tactile, aural) is …a highly positive contributing factor for the language learning process” (p. 145).

There are several positive reasons for using computers in the classroom for CMC that are related to positively influencing student affect. Walther (2011) has outlined numerous theories related to (M)CMC and user affect. The social information processing (SIP) theory (Walther, 1992) has recently had its scope expanded to include multimedia forms of online communication (e.g. Skype). The theory “seeks to explain how, with time, CMC users are able to accrue impressions of and relations with others online, and these relations achieve the level of development that is expected through off-line communication (Walther, 2011, p. 458). Can multiple Skype exchanges enable participants to develop a relationship – or at least feel as comfortable communicating with others online the same as in a face-to-face situation? Can these exchanges benefit FL learners or at the least, positively influence their attitudes and affect toward FL learning?
Toward this end, Guarda (2012, reported on the benefits of utilizing CMC in FL education. Amongst the reasons she has listed are authenticity, motivation, and autonomy. In addition, several reports state that “electronic communication seems to bring about more equality in student participation than face-to-face classroom interaction” (p. 21). Furthermore, Hampel (2014) reported that learners often state that they feel more able to experiment and practice the target language in online conversations vs. in front of their peers or in face-to-face communication situations. For example,

...being online can have a positive impact on a learner’s identity and self-image and increase motivation (Dörnyei, 2005). If body language is available in online environments, it is mediated by an additional level of digital tools (webcam, video image, software), rather than through the body alone (gestures etc.). (p. 104)

This positive impact is believed to be due to the often reported fact that learners often feel more comfortable, relaxed, and free to experiment or make mistakes in an online environment compared to in class (Hampel, 2014).

In the JEFL learning situation, Kikuchi and Otsuka (2008), have reported on the use of social networking services (SNS) in the classroom and Takase (2009) has shown how scaffolding and network learning in CMC English classes using blogs improved performance. Also, studies involving computer-mediated communication in foreign language learning have been shown to benefit students of Japanese and English (Ramzan & Šaito, 1998; Saito & Ishizuka, 2003). Furthermore, Freiermuth and Jarrell’s (2006) research on WTC and online chat has shown that a computer–mediated environment did, in fact, provide a more comfortable environment compared with a classroom learning setting. This resulted in the improvement of student WTC. In a more recent study to promote student EFL motivation, confidence, and satisfaction, Wu, Marek and Yen (2012) used Internet-based MCMC. In their study, EFL students in Taiwan interacted “live” with a NES in America. As mentioned above, student motivation, satisfaction, confidence, and performance improved as a result. The authors believe this is because CMC expands the engagement of students due to the interactive nature of the CMC methodology compared to traditional instruction methods (Wu, Marek & Yen, 2012).

CMC: Situational and task-based motivation

*Foreign language activities*

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 Amabile, 1989). In addition, previous research results demonstrated that JEFL students are more interested in living the language via pragmatic task-based language learning activities compared with more traditional, teacher-fronted lessons (Ockert, 2006). These results are in line with Willis, who describes task-based activities as those in which the learners use language communicatively with the goal of achieving a desired outcome (1996). Using MCMC via Skype in order to allow EFL students to introduce themselves and communicate with NS peers is a great way to achieve this goal.

Furthermore, 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. Noels, Clément, and Pelletier (1999) noted that educators can develop and improve student motivation, since motivation can be developed and maintained by the social (classroom) environment. The social environment of the foreign language classroom can be developed to enhance motivation by including MCMC FLAs and, therefore, improve self-confidence (Clément, Dörnyei, & Noels, 1994).
Increases in Japanese EFL Learners’ Motivation

Research conducted in EFL environments has shown that a combination of a learner’s personality (trait motivation) and situation specific (state) motivation contribute to EFL 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. Therefore, tasks that do not exceed learner ability are ideal.

In a study of JEFL students, Nose (2006) asked three questions regarding English language learning and use before and after an intervention. The intervention included communicating with a native speaker of English (NSE). The three questions were: Do you like English? Do you want to be able to speak English? And What is the most interesting (activity) during English time? His research revealed that 65% of the students responded to the third question 'most favorably'. Those students who reported that ‘games’ was the most interesting activity for the third question gave three reasons as to why the games garnered their interest. The reasons given were: 1) an increase of interest as a result of talking with an NSE; 2) listening to a foreign language; and 3) the increase of awareness towards communication (the necessity of English).

In a summary of research to date on technology and motivation, Stockwell (2013) observed that it is often the case that students are motivated by the bells & whistles effect of utilizing a new technology in the learning process. In other words, the technology itself was motivating – not necessarily the learning process itself. However, Altun and Yildiz (2013) did find that task-type in CMC did influence student communication strategies (CSs). Their research found that interactive, jigsaw task types resulted in more use of CSs, and therefore, more communication. The CMC environment did, in fact, positively influence student communication. Therefore, since CMC can influence the different methods of communication between interlocutors, it would be reasonable to assume that MCMC would do the same. EFL educators in Japan are encouraged to teach English via physical activities (MEXT, 2003). Furthermore, previous research in elementary CMC learning conditions has demonstrated this to be a positive method of EFL learning (Tagami, 2011a, 2011b). Therefore, the research conducted for this study set out to examine the results of an EFL MCMC exchange via Skype.

MCMC studies, some involving Skype

Several studies have been published on the motivating aspects of CMC (see Stockwell, 2013). However, the majority focus on asynchronous CMC (Polat, Mancilla & Mahalingappa, 2013). Examples include blogging (Normand-Marconnet & Cordella, 2012), email exchanges (Bourques, 2006), virtual worlds (Felix, 2005; Peterson, 2008), writing coursework (Fageeh & Mekheimer, 2013; Rubesch & McNeil, 2010; Warschauer, 1996), and video use (Collins & Hunt, 2011). However, there have been relatively few research papers written on synchronous CMC exchanges, particularly multimodal CMC (MCMC) studies. Godwin-Jones (2005) suggested that the voice over internet protocol (VoIP) emerging technologies such as Skype may be disruptive technologies to traditional classrooms; there have been few reported studies on the changes in affective variables of students who engage in real-time MCMC. Basically, do these ‘disruptions’ have a positive or negative impact on student affect toward language learning?

One research project testing for changes in affective variables of Japanese students was carried out by Takiguchi (2002). His results show that real-time, in-class communication with students in foreign countries using an audiovisual teleconferencing system (e.g. Skype or Gizmo) improved student interest, concern, and desire. The use of Skype has been
reported on as enabling students at schools in various regions around the world to communicate (see Takaguchi, 2002). When students engage EFL via Skype, it is used as a means for authentic communication with tangible results. Studies have shown that doing so helped introduce JEFL students to many different cultures and English uses, with positive results on student affect (see Tagami, 2011a). Additionally, studies with elementary students have shown that strong correlations between Skype-based FLAs, motivation, IP, confidence, WTC, and interest in foreign cultures / desire to travel overseas are strong (see Ockert & Tagami, 2014; Tagami, 2011a, 2011b).

According to experts in the field, intercultural communication is the sharing and construction of meaning through interaction with dissimilar others. WTC in an L2 involves readiness to start this process, which will hopefully lead to mutual understanding and trust. As a result, 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 presented in this paper are of just such a program.

The study

Based on the various studies reported above on student affect, and those using CMC in language learning, the author proposes the following research questions: Can CMC-based interventions increase student EFL confidence? To what extent can the use of CMC in the classroom enhance student perception of themselves as global citizens? How will real-time CMC influence student affective variables such as motivation, IP, and confidence?

Hypotheses

The use of the multimodal software Skype to communicate with students in Australia will increase the affective variables of the experimental group toward English language learning. 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.

Method

Participants

All of the students who participated in the study were in the 5th grade of elementary school and were 10-11 years old (N = 58). They were all native Japanese in the same school in Nagano prefecture, Japan. The experimental group (n = 29) participated in the Skype exchanges, while the control group (n = 29) did not participate. The curriculum, course objectives, and the native English speaking assistant language teacher (ALT) and the Japanese teacher of English (JTE) were the same for both groups of students.

Materials

The survey was in paper form and in Japanese. The data was put to a correlation analysis and principal component analysis (PCA) using statistical software (SPSS 18). 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.

Reliability.

The research project used a self-report measure administered in Japanese using 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 alpha reliability estimate is .88 for the instrument. This is an acceptable figure in the social sciences for an instrument of only six items (Dörnyei, 2006).

Validity.
In order to test the construct validity of the instrument, a principal components analysis (PCA) was conducted using Varimax rotation. In order to determine the factorability of the data collected during the first iteration of the surveys, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of Sphericity were conducted. For the KMO, “values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb” (Hutcheson & Sofroniou, 1999, in Field 2009, p. 647). The results for Bartlett’s test should be significant at the $p < 0.05$ level. As can be seen in Table 1, the KMO result of .818 is sufficient and the level of statistical significance is less than $p < .001$, indicating the data set is suitable for PCA.

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<tr>
<th>Table 1. The KMO and Bartlett's test of Sphericity for the instrument</th>
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<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</td>
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<td>Bartlett's Test of Sphericity</td>
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The results are six factors, indicating that each item measures a single construct. So it was concluded that the results of each of the variables are, in fact, representative of distinct constructs. The six factors, Eigenvalues, and the total variance explained by the factors are presented in Table 2. The PCA results show that the individual items measure unique constructs and therefore indicate six separate factors, one for each survey item.

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<th>Table 2. The PCA results of the six affective variables for the first iteration (N = 58)</th>
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</tr>
<tr>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td>df</td>
</tr>
<tr>
<td>Sig.</td>
</tr>
</tbody>
</table>

Note: The % of total variance explained is 63.656%.

While the Eigenvalues are below “1” for factors two through six, the purpose of conducting a PCA on so few items was determine if each is measuring a different construct. As none of the items grouped to form a single factor (with possible cross-loading[s]), the items are in fact measuring the different constructs as determined by the wording of the individual items.

Procedures
The survey was administered in class to students at the beginning of the school year (April) and again in December, after the final Skype exchange. During the intervening months, the students participated in several technology-based FLAs with students living abroad. Prior to the exchanges, the students used Google Maps and Google Earth to find the other schools exact location.

<table>
<thead>
<tr>
<th>Table 3. The Skype-exchange schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange Date</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>July 21&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>November 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>November 2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
<tr>
<td>December 2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
The November 1st 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 names of the *Pokémon* series characters. The November 2 exchange also lasted about 30 minutes. After an initial greeting by the entire class greeting of the students, the students introduced themselves individually. 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 in the target languages. 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" by the Japanese students.

**Results**

The six items’ descriptive statistics and correlations for the first iteration of the survey are provided in Table 4. As can be seen, all of the correlations are statistically significant.

<table>
<thead>
<tr>
<th>M</th>
<th>SD</th>
<th>FLAs</th>
<th>IP</th>
<th>Motiv.</th>
<th>CC</th>
<th>WTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL Activities</td>
<td>3.53</td>
<td>1.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Posture</td>
<td>3.48</td>
<td>1.75</td>
<td>0.55**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>3.31</td>
<td>1.70</td>
<td>0.78**</td>
<td>0.81**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comm. Confidence</td>
<td>3.05</td>
<td>1.56</td>
<td>0.50**</td>
<td>0.37**</td>
<td>0.49**</td>
<td></td>
</tr>
<tr>
<td>WTC</td>
<td>3.31</td>
<td>1.80</td>
<td>0.68**</td>
<td>0.66**</td>
<td>0.83**</td>
<td>0.50**</td>
</tr>
<tr>
<td>Desire to Travel</td>
<td>4.60</td>
<td>1.81</td>
<td>0.31*</td>
<td>0.43**</td>
<td>0.51**</td>
<td>0.30*</td>
</tr>
</tbody>
</table>

Note. **p < .01; *p < .05

The results of the differences for the control groups' M and SD for the six items before and after the intervention are presented in Table 5. The only statistically significant difference is for *Motivation*. The effect size was calculated for the statistically significant difference in *Motivation* for the control group.

```
<table>
<thead>
<tr>
<th>Control group</th>
<th>April</th>
<th>December</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>FL Activities</td>
<td>3.93</td>
<td>1.62</td>
<td>3.97</td>
</tr>
<tr>
<td>International Posture</td>
<td>3.66</td>
<td>1.61</td>
<td>3.97</td>
</tr>
<tr>
<td>Motivation</td>
<td>3.45</td>
<td>1.72</td>
<td>4.38</td>
</tr>
<tr>
<td>Comm. Confidence</td>
<td>2.67</td>
<td>1.62</td>
<td>3.30</td>
</tr>
<tr>
<td>WTC</td>
<td>3.07</td>
<td>1.60</td>
<td>3.52</td>
</tr>
<tr>
<td>Desire to travel overseas</td>
<td>4.62</td>
<td>1.83</td>
<td>4.41</td>
</tr>
</tbody>
</table>
```

Note. *p < .01

Since this study involved an experiment to test the influence of the Skype exchanges on the experimental group, Glass’ Δ was used to determine the effect size for the statistically significant differences for both groups of students. The ‘rules of thumb’ for effect size measures for independent means are: 0.2 indicates a small effect; 0.4, a medium effect; and 0.8 indicates a large effect size (Cohen, 1992). The effect size measure for *Motivation*
for the control group is .66, which indicates an effect size mid-way between medium and large.

Table 6: The experimental groups’ M and SD before and after the intervention (n = 29)

<table>
<thead>
<tr>
<th>Experimental group</th>
<th>April M</th>
<th>April SD</th>
<th>December M</th>
<th>December SD</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL Activities</td>
<td>3.14</td>
<td>1.70</td>
<td>4.10</td>
<td>1.18</td>
<td>0.96**</td>
</tr>
<tr>
<td>International Posture</td>
<td>3.31</td>
<td>1.84</td>
<td>4.48</td>
<td>1.10</td>
<td>1.17**</td>
</tr>
<tr>
<td>Motivation</td>
<td>3.17</td>
<td>1.70</td>
<td>4.10</td>
<td>1.18</td>
<td>0.93**</td>
</tr>
<tr>
<td>Comm. Confidence</td>
<td>3.45</td>
<td>1.40</td>
<td>3.41</td>
<td>1.38</td>
<td>-0.04</td>
</tr>
<tr>
<td>WTC</td>
<td>3.34</td>
<td>1.86</td>
<td>3.90</td>
<td>1.24</td>
<td>0.56</td>
</tr>
<tr>
<td>Desire to travel overseas</td>
<td>4.45</td>
<td>1.77</td>
<td>5.07</td>
<td>1.14</td>
<td>0.62*</td>
</tr>
</tbody>
</table>

Note. **p < .01; *p < .05

The results of the differences for the experimental groups’ M and SD before and after the intervention are presented in Table 6. The effect sizes were calculated for the variables with a statistically significant difference for the experimental group as reported in Table 6. The effect size measures are: FL Activities = .83; International Posture = 1.06; Motivation = .80; and Desire to travel overseas = .54.

Discussion

The subjects for this study were 10 and 11-year-old elementary school students who engaged in a live Internet based audio-visual language exchange with students from Tasmania, Australia. Therefore, the two confounding variables of age and the impact of technology offer further areas of investigation.

How are we to judge the effectiveness of the Skype exchanges? First, the statistically significant increase of .96 in the FLA results (p < .01, Glass’ Δ effect size of .83) is similar to that found by previous researchers in the JEFL learning context (e.g. Tagami, 2010). This supports the theoretical basis for the use of Skype as an intervention to improve student interest in English-language based FLAs. In addition, the notably large increase in IP after the intervention is possibly the most outstanding result. The increase of 1.17 points on a six point scale, and statistically significant at the p < .01 level with a Glass’ Δ effect size of 1.06 – an extraordinarily high level. This clearly indicates a meaningful increase that requires further research to verify. If it can be shown that a similar intervention can provide positive results, the research results presented herein will be supported. The statistically significant increase (p < .01) for motivation of .93 is very good news. In addition the Glass’ Δ for Motivation is .80 – another solid large effect. One of the goals of this experiment was to improve the students’ interest in EFL, and this result confirms that the students’ interest increased as a result of the intervention.

On the other hand, the students did show an increase in their reported Desire to travel overseas. The increase of .62 was also statistically significant at the p < .05 level, indicating that while this is not as large an increase as some of the other variables; it is, however, not due to chance alone. Perhaps more interventions over a longer period of time would alleviate this issue. Future studies could be conducted to help answer this question.

Oddly, the level of Self-perceived Communicative Competence went down for the experimental group, albeit only .04%. Since the pre-intervention mean was 3.45, this indicates that the students perceive a slightly lower than average amount of communicative confidence (3.50 on a scale of 1-6). Why would this be the case? There may be a simple explanation since the use of Skype was a first for the students, the exchange did not have a strong negative impact on the EFL confidence. Similarly, there was no positive effect either. Further research involving more exchanges and open-ended
follow-up questions specifically asking about their impressions of the exchange would help answer this question. In addition, there was an increase of .56 for the affective variable \( WTC \). While this is good news, the increase was not statistically significant. However, an increase is certainly desirable.

The control group did show an increase of .96 for Motivation, and this was statistically significant at the \( p < .01 \) level with a Glass’ \( \Delta \) of .66. This group of students originally reported higher Motivation, yet also reports this rather high increase. Perhaps this was due to the influence of the curriculum, which was the same for both groups. Of particular interest for this study is the fact that there was absolutely no change for either the FL Activities or the Desire to Travel Overseas for the control group. In other words, the experimental group shows positive improvements for all of the affective variables except Self-perceived Communicative Confidence, while the control group remained basically unchanged.

Regarding the survey instrument itself, the percentage of the total variance explained is well over 60% and this indicates a strong analytical accounting for so few questions. In motivation studies, “explaining more than 40% of the variance...is an exceptionally high figure” according to Dörnyei (2014, p. 521). Furthermore, the effect size measures for the experimental groups statistically significant differences are: FL Activities = .83; International Posture = 1.06; Motivation = .80; and Desire to travel overseas = .54. Based on the above mentioned method for interpreting their value(s), these effect sizes are very desirable and support the efficacy of the study.

What are some of the benefits of introducing live, video MCMC exchange experiences for young EFL Japanese learners? It is possible to use video communications as a means to enjoy English activities by using such exchanges as a foreign language activity to motivate students of any age or learning context. Also, MCMC makes it possible to easily connect with schools in various regions around the world, thereby introducing students to many different cultures and varieties of English (Tagami, 2010).

According to Tagami (2010), there are several benefits and challenges of using a video phone for Japanese students of English. First, the use of real-time exchanges gives the children both fun and high tension. Seeing the other person’s behavior and facial expressions provides the necessary realism for real communication. In addition, their reaction is transmitted immediately, and because of that the participants could exchange information and emotions. As a result, there was the possibility for communication as a dialogue, which was aimed at sharing both feelings and meaning during the interaction (Tagami, 2010). This result supports Meskill’s (1999) observation that the use of multiple modalities has a positive influence on L2 learning. The Skype exchanges offered not only the engagement of multiple modalities sufficient to keep students involved, but enough to positively influence their affect toward EFL as measured by the survey instrument, too. It may also be argued that these students are simply so young that they perceive the activity as 'play' rather than learning. Therefore, they do not as yet have a fully developed sense of 'self' about which they can feel self-conscious.

There are limitations to the present study. First, the survey for this paper consisted of six simple statements. However, because the students are so young, it was believed that a more complicated survey would have been inappropriate. Future research using a similar instrument which replicates the present study will help verify the desirability of using the instrument. Studies utilizing a more sophisticated instrument, provided it can be proven reliable and valid, would be useful to help researchers in choosing an appropriate instrument, too.
Conclusions

Technology continues to have a positive impact both within and on the field of education. By actively engaging learners in the learning process, technology provides a means to capture interest and foster learning. There are several reasons why learners may lose interest in learning another language: time pressure; the fact that their friends do not use the language; boredom; they see no future use for it; and other interests, to name a few. However, the use of recent technological advances such as the Internet provides an interesting alternative to traditional educational approaches. The use of an in-class Skype exchange with NESs of a target language provides several positive outcomes for the students involved. As this study shows, the Japanese students report an increase in five of the six affective variables surveyed. They report an increase in interest in foreign language (English) activities and foreign countries (different cultures), a desire to study more in order to communicate in English, a desire to communicate with foreigners in English, and a greater desire to go overseas at some time. These results are too strong to ignore and further studies to investigate the use of Skype or similar technologies to increase student affective variables would be most welcome.

An examination of the correlation matrix results in this paper show strong and positive relationships between FL Activities, International Posture, Motivation, Self-perceived Communicative Confidence, and WTC. Therefore, it is reasonable to hypothesize that increased interest in MCMC FLAs would positively influence the other affective variables. Further studies to test this hypothesis would be of interest. Additionally, post-intervention open-ended qualitative questions aimed at finding out why students are influenced by the Skype exchanges would also be of benefit.

Finally, this technology enables educators to create ‘live’ communication opportunities in the classroom. The advantages of such events include: authentic speech, including, but not limited to: auto-corrections; natural pauses; facial expressions; pragmatic speech acts; interruptions, and the required handling of them; background noise, and the various ways to overcome this interference. The classroom uses are both innovative and original ways that educators can use to take advantage of the most up-to-date technologies to help their students learn language. In addition, students and teachers could make a video of the event, thereby creating a unique recording of a special time in their lives forever. The author believe that future, longitudinal studies which track student progress based on gender, future goals, and the intensity to learn English would of great benefit for teachers, students, and educational systems around the world.
Acknowledgements

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References


Increases in Japanese EFL Learners’ Motivation


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**Appendix**

**The student survey**

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.
Biographical Statement

David Ockert is a lecturer in the Department of International Economics at Toyo University, Japan. He has an Med from Temple University and a Level 2 JLPT certificate. His teaching interests are in communication, academic writing, and presentation courses. His research interests are in motivation, motives / orientations, affect, classroom activities (traditional vs. task-based), CALL, and educational system development.

Email: ockert@toyo.jp

Website:
http://www.researchgate.net/profile/David_Ockert2
http://toyo.academia.edu/DavidOckert