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Applying role-playing strategy to enhance learners’ writing and speaking skills in EFL courses using Facebook and Skype as learning tools: a case study in Taiwan

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English as a foreign language (EFL) instruction faces many challenges in Asia because of many cultural and environmental factors, such as the lack of interactive speaking environments, emphasis placed on test scores, and foreign language anxiety. The purpose of this research is to conduct an EFL instructional course by integrating Facebook (asynchronous online discussion) and Skype (synchronous online discussion) as platforms through which students perform role-playing based learning activities and to observe the effects of the course on the challenges mentioned above. The study consists of 42 participants who are enrolled in an English conversation course in a business college in Taiwan. This study conducted a learning performance analysis, correlation analysis, and qualitative content analysis of the learning process. The results indicate that the learners improved their speaking and writing skills through the learning tools and role-playing activities. The content analysis also demonstrated that learners could improve their speaking and writing skills via peer-to-peer and self-correction behaviors. We also provide several recommendations for EFL educators and researchers.

Keywords: role-playing; EFL; Facebook; Skype; social networking services; online discussion

1. Introduction

Social and cultural interactions have been shown to be essential for developing meaningful strategies for English as a foreign language (EFL) learners. In Taiwan, EFL learners have traditionally been faced with particular challenges in their efforts to learn. These challenges range from culturally based mentalities to practical issues of a suitable environment. One of these obstacles is the lack of a practical environment for the practice and usage of English, which is essential for improving oral communication (Yang & Chang, 2007). Regardless of the students’ actual English speaking abilities relative to those around them, speaking English openly around other Asians becomes a stressful ordeal because everyone is afraid of being looked down upon by those around them.

Much research has been conducted on EFL instruction with respect to effective strategies and challenges (Aliakbari & Jamalvandi, 2010; Liu & Jackson, 2008; Shen & Suwanthep, 2011). First, the interactive speaking and listening aspect of language learning is essential to a student’s learning experience, but students have little chance to speak and write in English outside of the classroom. It is, therefore, imperative to optimize the available classroom time and create opportunities for the development of learners’
speaking and writing skills (Erten & Altay, 2009). This shortage of interaction also affects other areas critical to language learning. The lack of a proper environment deprives the learners of language learning and cultural exchange opportunities, which affects their language acquisition and motivation (Kormos & Csizér, 2007). Language, being a social mechanism of communication, has deep connections with the cultural and social dynamics of communication, which also have a major impact on the learning experience. The cultural and social dynamics of communication create anxiety within a learner called “foreign language anxiety.” According to MacIntyre and Gardner (1994), foreign language anxiety is a complex, multidimensional phenomenon referring to the “feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning.” Horwitz, Horwitz, and Cope (1986) identified three components of foreign language anxiety: communication apprehension, test anxiety, and fear of a negative evaluation. According to McCroskey (1977), the concept of communication apprehension is “an individual’s level of fear or anxiety associated with either real or anticipated communication with another person or persons.” People who experience high levels of communication apprehension “withdraw from and seek to avoid communication when possible” (McCroskey, 1977). A major concern is the impact of social standards on English learning. For example, the cultural and academic emphases on tests and quantifiable results in language learning create an environment that rewards test-taking ability and English knowledge, rather than skill. The emphasis on test-taking ability also contributes to the stress associated with English learning that is scored, measured, and compared to others, which results in a negative impact on students’ motivation. This negative impact is directly related to the fear of a negative evaluation in which the students are judged and compared to their peers based on their test results and overall performance in class. This fear is especially prevalent in Asian cultures. The cultural stigma associated with English in Asia creates unnecessary levels of stress and self-consciousness within EFL learners. Research into new strategies and technologies to address the abovementioned traditional EFL challenges has already been fruitful.

Technology has played a major role in helping to address the many challenges facing EFL learners. Computers have been noted to be utilized in the learning of oral, listening, and spoken language skills for a considerable time already (Higgins, 1995). The past 10 years have seen a trend in foreign language departments’ offering distance learning classes due to increased enrollment, shortages of space, and budget cuts (Banados, 2006; Chenoweth, Ushida, & Murday, 2006; Kraemer, 2008; Sanders, 2005; Strambi & Bouvet, 2003). With the introduction of technological advances in communication and EFL strategies, the use of computer-assisted language learning (CALL) is a part of the natural progression that has contributed many benefits to EFL instruction.

CALL is of interest to language teachers and learners because it provides individualized instruction and immediate feedback on the correctness of a learner’s response to computerized tasks (Nagata, 1993). CALL helps to personalize the learner’s experience by individualizing the response to each learner. Furthermore, CALL programs allow students to learn at their own pace (AbuSeileek, 2007). Computers also have other benefits to offer. With the computer’s ability to deliver content and instruction consistently and repeatedly without tiring, they have been further integrated into language learning, encouraging students to participate in active communication by eliminating the anxiety that arises from face-to-face interactions (Bikowski & Kessler, 2002).

The connectivity of computers through the Internet has also created novel learning opportunities between people. For example, advances in network technologies have resulted in an increase in asynchronous CALL approaches that may be used in virtual
environments, thereby exhibiting great potential for technology as an EFL tool (Gorjian, Moosavinia, Kavari, Asgari, & Hydarei, 2011). These technologies also allow more people to connect in learning activities and engage in cooperative learning, which is essential in computerized instruction (Schcolnik & Kol, 1999). This ability to connect more people for longer periods of time in more dynamic environments has increased the satisfaction of learners worldwide. Accordingly, research has shown that CALL scores highly in terms of satisfaction by Italian and Japanese learners (Morton, Davidson, & Jack, 2008).

Computer-based learning also has its limitations when used in the real world. This approach is a tool that has not yet been perfected, and requires further research. For example, students and teachers may need to be trained on how to benefit from online interactions, as computer-based learning techniques are not a natural form of communication (Blake, 2008). Similar to any new technology, ongoing research and training is needed to maximize the benefits of CALL. However, there are also limitations, given the nature of CALL. For example, some learners have found face-to-face instruction more beneficial than online instruction (Sanders, 2005). Such a limitation should be kept in focus when using CALL and combining it with other strategies and different platforms.

The “Internet revolution” offers many opportunities and platforms through which CALL can be applied. For example, studies have shown the potential of text chats in second language development (Alwi, Adams, & Newton, 2012). One of the more recent developments in the “Internet revolution” is the introduction of social networking services (SNSs). Web-based social networking permits the expansion and maintenance of one’s social network through websites that allow users to share information, interact with others, and develop communities around similar interests. One of the most prominently used SNSs is Facebook. Even with the popularity of SNSs, there is a lack of research regarding the application of SNSs in the field of education and EFL instruction. However, in the few studies that have been completed, Facebook and other SNSs have shown significant potential in how they may benefit EFL instruction.

Given how thoroughly Facebook can connect and involve people, its ability to serve a pedagogical purpose has been the subject of great interest in many previous studies (Kabilan, Ahmad, & Abidin, 2010; Madge, Meek, Wellens, & Hooley, 2009; Selwyn, 2009; Shih, 2011). The research indicates that many characteristics of Facebook may prove to be beneficial in EFL instructional strategies. For instance, Facebook’s interface is familiar to a large number of Internet users. Besides, they have a functional understanding of this ready-made communication platform and trust it. Therefore, using Facebook for a specific purpose, such as EFL instruction, would not require a lengthy adaptation period.

Furthermore, the use of computers and mediums, such as Facebook (Coll-García & Linser, 2006; Shen & Suwanthep, 2011; Shih, 2011), increases student motivation in EFL learning. As Facebook’s accessibility succeeds in engaging its users, it may also increase the motivational effects on learners as well. Facebook is a platform where users may not face the pressures of communicating in person or in a real-time voice, where they are forced to respond immediately (Liu & Jackson, 2008). Rather, Facebook allows the user to prepare a response without the fear of negative evaluation, thereby lowering the anxieties that are associated with typical EFL students and increasing their willingness to communicate (Liu & Jackson, 2008). Similarly, Facebook advances learners’ confidence and collaborative efforts (Omar, Embi, & Yunus, 2012). Facebook also allows users to conduct private and open group discussions online, which are ideal platforms for the introduction of situated learning or role-playing instructional strategies. However, due to its nature, this type of online platform still has its limits. One shortcoming of Facebook is
that the current SNS applications would only be effective in the reading and writing aspects of EFL learning. A different platform would be required to address the speaking and listening aspects of language learning.

Most experts consider the speaking and listening aspects of EFL learning to be essential. Oral language production helps learners to improve their language abilities in three ways: by comparing their own production to the target language, by testing how the language works, and by reflecting on and discussing the language (Gáñem Gutiérrez, 2003; Satar & Özdener, 2008; Swain, 1997). In addition, sociocultural studies claim that speaking is a cognitive tool that can be used by learners to regulate themselves, others, and objects (e.g., language and tasks) (Brooks, Donato, & McGlone, 1997). Vygotsky (1978) goes as far as to say that higher mental functions develop socially, that is, through interactions with more capable interlocutors, and these functions are later internalized.

The need for socialization may be satisfied with the introduction of computer-mediated communication (CMC) platforms. CMC is believed to provide a more relaxed environment, where students are less concerned about making mistakes and, hence, feel less anxious (Kern, 1995). CMC would be a valuable tool in constructive learning because of its ability to support interaction and collaboration between diverse and dispersed students in the form of online discussions (Wang, 2005).

A synchronized CMC platform, such as Skype, supports both text and voice, allowing for the functionality of a speaking practice agent. Accordingly, voice conversations may add an additional dimension to EFL activities: listening and speaking components. Skype combined with Facebook is a potentially solution to the limitations of online CALL strategies in EFL. The integration of Facebook and Skype may improve EFL learners’ English abilities and enhance learning experiences by creating a familiar and less stressful environment to use and practice the target language.

Aside from addressing the different areas of language learning (listening, speaking, reading, and writing), a proper instructional strategy is also critical to the learners’ experiences and results. Role-playing is an important strategy in that it focuses on the ability to speak and communicate by playing different roles in a given real-world situation. This strategy addresses particular issues, such as the concern in China that most students finish their college English courses as good test-takers but poor communicators (Li, 2001). Many traditional approaches, such as the grammar translation method, focus on mastering the target language structure, vocabulary, and literature at the expense of speaking and communicating (Aliakbari & Jamalvandi, 2010). This trade-off results in learners who are able to reproduce responses in predictable situational patterns but have significantly more difficulty in communicating effectively in unpredictable real-world situations beyond the classroom (Nunan, 2001). Hence, the task-based approach is a response to the demand to provide the optimal circumstances for learners to improve their speaking ability in accordance with the requirements to “communicate effectively” and “communicate meaningfully” (Luchini, 2004).

The task-based approach involves the use of tasks that engage learners in meaningful interactions and negotiations (Aliakbari & Jamalvandi, 2010; Richards, 1999) manifested through a role-playing strategy. Role-playing incorporates the replication of real-world situations in which learners can use the target language. Much research has been focused on role-playing and situated scenario strategies from communicative language teaching (CLT) to task-based language teaching (TBLT) and their web-based applications (Aliakbari & Jamalvandi, 2010; Coll-Garcia & Linser, 2006; Shen & Suwanthep, 2011). The use of role-playing increases the students’ level of focus (Hou, 2011) by allowing the learner to assume a role in a particular simulated situation and training the learner to
concentrate on the task at hand, rather than on the language used to complete the task. The situated scenarios can be used in a first-person (role-playing) format or third-person discussion format allowing for multifaceted language use (Hou, 2011) and providing the learner with the opportunity to use language in discussions of multiple dimensions. The popularity and motivational characteristics of Facebook and Skype may be an effective complement to the role-playing strategy as an EFL instructional tool. This study aims to test the combined effects of the role-playing strategy on the learner’s experience and results.

It has been suggested that Facebook is a platform worth researching in its meaningfulness as an EFL teaching tool and in ability to enhance the students’ learning experience (Kabilan et al., 2010). Facebook allows for instantaneous communication between individuals and multiple members of a group. The entertainment and social aspects of this platform may prove to be a motivational factor, thereby providing the EFL learning activities conducted on this platform with a more attractive edge and possibly maintaining student interest.

Meanwhile, Skype and other voice over instant messaging (VoIM) platforms have also received attention for their potential in education and instructional design. Skype allows for voice (plus video) conversations over the Internet in addition to providing chat capabilities. VoIM allows learners to activate listening and speaking components in their activities. The Internet-based nature of this platform also means that a class (verbal conversations) may be conducted without students and teachers having to physically be at the same location, thereby allowing for much more flexibility in course scheduling and class time allocation. Aside from the instructional platforms, the role-playing instructional strategy was also a focus of this study. This experiment aimed to investigate the effectiveness of applying the role-playing instructional strategy to Facebook and Skype as a means to enhance learners’ speaking and writing skills in an EFL class.

Research objectives

(1) To conduct an EFL instructional course empirically by integrating Facebook and Skype as platforms through which students engage in role-playing based learning activities.

(2) To explore and discuss whether the learners improved their speaking and/or writing skills.

2. Methodology

2.1. Participants

The 42 participants were students enrolled in an English conversation course at a business college in Taiwan. Demographically, the group was composed of 10 males and 32 females with an average age of 16. The participants also had sufficient familiarity with Facebook and Skype, the functions and usage of these platforms.

2.2. Instructional design and procedure

The process involved three phases: the initial classroom lecture, a Facebook discussion in subgroups, and Skype negotiations with opposing groups. This entire process was framed by a pretest and a posttest in both writing and speaking as the main research tool to assess the effectiveness of this EFL strategy. The entire process lasted 11 weeks.
2.2.1. Phase 1: Pretest/lecture (weeks 1–5)

In the first phase, the entire group of participants (42 people) were administered an International English Language Testing System (IELTS)-based pretest designed by an EFL expert to assess initial English writing and speaking levels. Design of the course closely followed IELTS with regard to vocabulary, grammar, writing skills, and composition requirements that were adjusted by taking into account the students’ English language level and learning needs. IELTS nine-band scale (IELTS, 2012) was used to rate the tests, as shown in Table 1. A special emphasis was also placed on the business-related vocabulary and communication skills as the students were prepared for role-playing activities.

The four sub-dimensions of IELTS test – Listening, Reading, Writing, and Speaking – were all integrated in the role-playing activities. The writing part of IELTS was adapted by including more contents related to daily life, while speaking part was focused on one-on-one way of testing the students. Interactive learning via Facebook trained students’ writing skills and their use of vocabulary and grammar. Meanwhile, role-playing activities, one-on-one practice, via Skype trained students’ listening and speaking abilities and their use of vocabulary and grammar. Therefore, the role-playing activities enabled to train students’ abilities comprehensively to help them to get IELTS score as high as possible.

The course was closely aligned with IELTS due to the test’s standardization, worldwide applicability and such qualities as using face-to-face interaction to test the takers’ speaking skills. This kind of the test arrangement is similar to and prepares the test takers for the real-life situations. This might be particularly relevant to the students’ future

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Expert user: has fully operational command of the language: appropriate, accurate, and fluent with complete understanding.</td>
</tr>
<tr>
<td>8</td>
<td>Very good user: has fully operational command of the language with only occasional unsystematic inaccuracies and inappropriacies. Misunderstandings may occur in unfamiliar situations. Handles complex detailed argumentation well.</td>
</tr>
<tr>
<td>7</td>
<td>Good user: has operational command of the language, though with occasional inaccuracies, inappropriacies, and misunderstandings in some situations. Generally handles complex language well and understands detailed reasoning.</td>
</tr>
<tr>
<td>6</td>
<td>Competent user: has generally effective command of the language despite some inaccuracies, inappropriacies, and misunderstandings. Can use and understand fairly complex language, particularly in familiar situations.</td>
</tr>
<tr>
<td>5</td>
<td>Modest user: has partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes. Should be able to handle basic communication in own field.</td>
</tr>
<tr>
<td>4</td>
<td>Limited user: basic competence is limited to familiar situations. Has frequent problems in understanding and expression. Is not able to use complex language.</td>
</tr>
<tr>
<td>3</td>
<td>Extremely limited user: conveys and understands only general meaning in very familiar situations. Frequen breakdowns in communication occur.</td>
</tr>
<tr>
<td>2</td>
<td>Intermittent user: no real communication is possible except for the most basic information using isolated words or short formulae in familiar situations and to meet immediate needs. Has great difficulty understanding spoken and written English.</td>
</tr>
<tr>
<td>1</td>
<td>Non-user: essentially has no ability to use the language beyond possibly a few isolated words.</td>
</tr>
<tr>
<td>0</td>
<td>Did not attempt the test: no assessable information provided.</td>
</tr>
</tbody>
</table>

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**Table 1. IELTS 9-band scale. (Source: IELTS band scores.)**

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career (when taking part in the job interviews, etc.). Thus, IELTS-based test was chosen instead of other assessment forms. Besides, English proficiency tests are extremely important to non-native English speakers with regard to their future education. Therefore, this course trained the students to take IELTS test and it was the requirement that students had to take it after they had finished the course. This test established a basis for the participants’ relative English abilities. Table 2 shows the pretest’s sample questions, students’ answers, scores, and evaluation descriptions.

The group was later put through a regimen of two weeks of classroom lectures. The lectures entailed the teaching of the target language using the role-playing scenario (business-to-business, B2B, buyer/seller scenario). In the classroom, the participants practiced conversing and writing the target language. During this phase, the participants were familiarized with the target language but not to the point of fluency or independent use of the language. The objective of the classroom lectures was to introduce to the students vocabulary needed for the subsequent role-playing activities. It was not expected that the students would have sufficient practice time in the classroom to acquire the target language to any significant degree. The team division, role assignment, and scenario setup were completed in the fifth week of this phase.

2.2.2. Phase 2: Role-playing/Facebook discussions (weeks 6 and 7)
In the second phase, the students were divided into two teams (seller/buyer). The seller side represented an office equipment company, and the buyer side represented a publishing company looking to setup a new department. Both the selling and the buying teams were divided into four 5- to 6-person product teams. Each team was assigned a leader to coordinate the buying or selling of a particular item. The result was that two teams were responsible for each of the following items: a desktop computer, a printer a camera, and a laptop. Each team was on either the buying or the selling side of an item. As role-playing increases the students’ level of focus (Hou, 2011), it was expected that this might induce self-correction and peer-to-peer correction behaviors.

Role-playing activities were designed to create an environment with reduced levels of foreign language anxiety (Horwitz et al., 1986) and anxiety arising from face-to-face interactions (Bikowski & Kessler, 2002). A private group was created on Facebook for each team for the use of their meetings. They were allowed to utilize such Facebook functions as posting on the “Wall,” commenting on the posts and sharing media/content by copying links, photos, and other content from the websites other than Facebook. The “Wall” served as a basis for discussions with the participants’ thoughts being expressed in the comments. Sharing media/content encouraged the search for information and the use of the Internet resources. The students were not allowed to use private messages or text-based chats in order to avoid situations when only part of the participants is aware of certain information. Communication produced by any one team’s member had to be available to all other members to ensure everyone’s participation and collaborated discussion as Facebook has been noted to enhance learners’ confidence and collaborative efforts (Omar et al., 2012). All communication had to be conducted in the English language only, as shown in Figure 1.

The teams’ challenges and objectives were also assigned. Their objectives were based on the overall scenario created for this role-playing: a publishing company has determined that it is in its strategic interest to establish a new marketing department, and it requires basic office equipment for the new incoming staff; an office equipment company has a surplus inventory of particular products and needs to unload this surplus before the
<table>
<thead>
<tr>
<th>Sample questions</th>
<th>Student</th>
<th>Question</th>
<th>Answer</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing pretest sample question1</td>
<td>#39</td>
<td>Your friend, Sally, is coming to visit Taiwan for 4 days and 3 nights. She needs you to arrange an one day meeting for her with Dr. Wu. She’d also like to go sightseeing, have dinner at a nice restaurant, and go shopping. Please reply her with a detailed schedule by email.</td>
<td>Welcome to Taiwan, when you are arrival, I will go to the airport to pick you up, And take you to Hotel. You can take a day off, the next day and then went to Dr. Wu. Breakfast at the hotel to eat in the afternoon to eat lunch there, Dr. Wu. The next few days, good fun can be. Second day we went to National Palace Museum in the afternoon to go out to eat lunch, come back to visit. On the third day we visited 101. The fourth day I take you to the airport the morning.</td>
<td>2</td>
<td>Very limited command of the language, major mistakes with the structure of sentences and verb tenses, frequent fragments.</td>
</tr>
<tr>
<td>Writing pretest sample question2</td>
<td>#17</td>
<td>Your friend, Sally, is coming to visit Taiwan for 4 days and 3 nights. She needs you to arrange an one day meeting for her with Dr. Wu. She’d also like to go sightseeing, have dinner at a nice restaurant, and go shopping. Please reply her with a detailed schedule by email.</td>
<td>First, welcome to Taiwan! I’m sure you’ll enjoy the visit this time, here’s the schedule I’ve made for you for 2 days: I’ll see you at 8 in the morning at Taipei Main Station, after buying something to eat, I’ll take you to the Caesar Park Hotel to check in, it’ll be about 9 at that time. After checking in and putting your stuff in your room, we’ll start off to see Dr. Wu. Her office is around the corner, not far from the hotel. We’re going straight to her office, which we of course will see the animals she’s curing, and I believe it’s what you’re seeing her for. We’ll arrive there at</td>
<td>9</td>
<td>Fully operational command of the language, logical and accurate way of presenting ideas. Minor mistakes with punctuation, run-on sentences.</td>
</tr>
</tbody>
</table>
10 approximately, I think an hour is enough for us to walk to the office leisurely. Meeting with Dr. Wu will take about a few hours, seeing that you two probably wanted to exchange the knowledge about curing animals in different countries fully. We’ll eat with Dr. Wu for lunch, and we’ll be going to the second floor of Taipei Main Station, the Breeze Center, there are many choices of food, and I think you’ll be able to choose the goods you’d like to eat. ............ ...Hope you have fun!!

Speaking pretest sample question1

Have you bought anything over the phone? If not, would you? Why?

I will not buy things with the phone, because I will not see the things really. ...um. And I will buy it in store, because I can...I can see...that’s products...um...um...and how...and sales person will help me how to use it.

Speaking pretest sample question2

Have you bought anything over the phone? If not, would you? Why?

I never buy anything over the phone, because it’s not safe. My family like to watch the shopping channel, then buy product through the phone. But I like to see the real product in the store. I feel more safe in this way.

3 Very limited command of the language, frequent breakdowns in communication.

8 Good operational command of the language, arguments well justified. Minor grammar mistakes.
introduction of a new product line. Both sides had to decide in advance what was the preferred brand and model of the item they were going to buy/sell. Challenges included getting the best price possible for the buying team, meanwhile, the selling team had to make sure they were able to attract customers without making unreasonable discounts (possibly, by offering alternative products, free accessories, etc.)

This scenario was designed to replicate what a typical professional in a mid-sized company might encounter. The scenario allowed for the development of a variety of different perspectives, agendas, and strategies. The multiple dimensions of this scenario created enough diversity in the roles for the participants such that each interaction between...
them was different from those of other groups. Having to adapt to each new meeting in his/her group, the participants learned to adapt and respond with the focus language.

The following two weeks were used by the teams to evaluate their situation and its challenges and establish their strategies moving forward. Prior to any contact with the opposing team, the teams were instructed to discuss the situation internally and establish a coordinated strategy in order to make sure actions of the individual members match during the next phase when one-to-one negotiations were carried out via Skype. The teams had to make sure they reach their best performance with regard to buying and selling actions – not buying/selling for higher/lower price than collectively agreed by the team. The participants were required to hold meetings with each other via Facebook to complete this task. This asynchronous online discussion gave the participants an opportunity to improve their reading, written communication, and collaborative learning skills. The discussions also set a stage to practically apply vocabulary that was introduced to the participants during the first phase. The participants’ conversations were conducted on the Facebook “Wall” in their groups and served as the recording mechanism for their discussions.

2.2.3. Phase 3: Role-playing/Skype negotiations (week 8)

Once the teams completed and established their buying or selling strategies, the third phase was initiated. During this week, the groups from the buy and the sell side of each item conducted meetings and negotiations based on the strategies discussed in their respective teams. In the end, there was one buyer to one seller for the purchase of one product. The group conducted this negotiation phase using Skype (VoIM). The participants were instructed to keep conversation for 10 minutes. They were not allowed to use the instant messaging function. By following the instructions, the participants had to bargain, i.e. immediate agreement with the price offered by either selling or buying side was discouraged, as shown in Figure 2. All conversations had to be carried out in English language only.

Undergoing this phase, the participants had already experienced the role that they played from at least two angles: that of a staff member or manager and that of a sales person or client. The depths of the roles that they played allowed the participants to use the target language from different perspectives and in different scenarios as well as to develop their oral communication and negotiation skills. The third phase also required the use of vocabulary presented to the participants during the first phase. The exposure to different scenarios assisted in guiding the students to produce language as opposed to simply repeating language.

Once the negotiations were completed between the four pairs of teams, a delay/testing week was allotted, giving the participants time to absorb and digest what they had acquired. This week also allowed the language that was actually acquired to settle, and any learning that was not truly retained was sifted out. The posttest (an IELTS-based test designed by the same EFL expert who designed the pretest) was later administered for a more meaningful result. Table 3 shows the posttest’s sample questions, students’ answers, scores, and evaluation descriptions.

A Pearson correlation analysis was conducted to check for the inter-rater reliabilities as there were two EFL experts who rated the pretest and the posttest (including the EFL expert who designed the pretest). The inter-rater reliability estimates for the speaking pretest and posttest were \((r = 0.884, p < 0.01)\) and \((r = 0.927, p < 0.01)\). As for the writing pretest and posttest, the inter-rater reliability estimates were \((r = 0.938, p < 0.01)\) and \((r = 0.895, p < 0.01)\), respectively. In cases of the alpha coefficients for the speaking
pretest, speaking posttest, writing pretest, and writing posttest were 0.824, 0.826, 0.827, and 0.819, respectively.

Finally, the participants were also given a questionnaire regarding their personal attitudes about the course. The attitude assessment was composed of open-ended questions targeting student feedback regarding their personal performance, the performance of their peers, and the effectiveness of the program.
<table>
<thead>
<tr>
<th>Sample questions</th>
<th>Student</th>
<th>Question</th>
<th>Answer</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing posttest</td>
<td>#41</td>
<td>Your company (Banana Daily / Orange Information Technology) is organizing a Year End Party, which will be on December 31, 2011. Since you are the event coordinator, you need to decide what to purchase for this event. Your budget is NT$500,000. Please write an email to place an order.</td>
<td>I am Banana Daily’s employee, our company will hold organizing a Year-End Party on December 31, 2011. And we want hold to draw prizes an activity, so I have purchase gift. First, one Apple® 32GB iPad 2™ with Wi-Fi + 3G for AT&amp;T - White (MC983LL/A), and two PlayStation Vita System - WiFi (PlayStation Vita), and ........... These are that we want something to buy. I will pay $11617.15 for you Is very happy to cooperate with you.</td>
<td>3</td>
<td>Limited command of the language, major mistakes with the structure of sentences.</td>
</tr>
<tr>
<td>sample question1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing posttest</td>
<td>#16</td>
<td>Your company (Banana Daily / Orange Information Technology) is organizing a Year End Party, which will be on December 31, 2011. Since you are the event coordinator, you need to decide what to purchase for this event. Your budget is NT$500,000. Please write an email to place an order.</td>
<td>This is a letter from Orange Information Technology. Our company is having a Year End Party which is on December 31. I’m here to order things that will be giving on the party. Please double check my list below before you send it! Thanks. 1. Bose® OE2 Audio Headphones- Black (346018-0010) [5] $149.95 × 5 = USD749.72 2. JBL OnStage Micro II</td>
<td>8</td>
<td>Good operational command of the language. Minor mistakes with verb forms.</td>
</tr>
<tr>
<td>sample question2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample questions</td>
<td>Student</td>
<td>Question</td>
<td>Answer</td>
<td>Score</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Speaking posttest</td>
<td>#25</td>
<td>What’s the most important quality in a good sales person?</td>
<td>I think...a good sales person...need to a good speaking skill. The sales person good to be can...for...for...for...</td>
<td>2</td>
<td>Very limited command of the language, frequent breakdowns in communication, poor vocabulary.</td>
</tr>
<tr>
<td>Speaking posttest</td>
<td>#17</td>
<td>What’s the most important quality in a good sales person?</td>
<td>I think the most important quality of a good sales is that you need to have a good communication with a customer. And you need to have a good attitude to help the buyers. You need to be patient and nice to your customers.</td>
<td>8</td>
<td>Good operational command of the language, arguments well justified. Minor mistakes with word forms.</td>
</tr>
</tbody>
</table>


Please deliver all the items to REGENT hotel where the party is going to be at. I have to receive them all on the 30th. Thank you.
3. Results and discussion

3.1. Learning performance analysis

The results from the posttests were analyzed using a paired $t$-test to compare the students’ performance on the pretest and posttest, as shown in Table 4. The final results revealed a significant improvement in the scores on the English writing posttest ($t = -5.20$, $p < 0.001$) and the English speaking posttest ($t = -4.71$, $p < 0.001$). The results reflected a pronounced and meaningful improvement in the participants’ English writing and speaking abilities.

3.2. Correlation analysis

A Pearson correlation analysis was conducted to analyze the correlation between discussion engagement (i.e., discussion frequency on Facebook/Skype) and learning performance (i.e., scores on Facebook/Skype discussion quality and posttest). The quality of students’ discussion was reviewed by the teacher based on a five-point Likert scale (0 = low to 5 = high). Each Facebook/Skype message was scored based on grammar, pronunciation, and articulation to evaluate learners’ discussion quality. As shown in Table 5, considering that the Facebook exercises were focused on writing skills, a higher level of discussion frequency on Facebook was also potentially linked to the writing scores on the posttest ($r = 0.527$, $p < 0.01$). Additionally, the level of discussion frequency on

Table 4. Paired $t$-tests of the pre- and posttest scores.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing pretest</td>
<td>4.1429</td>
<td>1.35379</td>
<td>-5.20***</td>
<td>.000</td>
</tr>
<tr>
<td>Writing posttest</td>
<td>5.1905</td>
<td>1.82447</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speaking pretest</td>
<td>3.7857</td>
<td>1.35315</td>
<td>-4.71***</td>
<td>.000</td>
</tr>
<tr>
<td>Speaking posttest</td>
<td>4.6905</td>
<td>1.67460</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ***$p < 0.001$.

Table 5. Correlation analysis of learners’ performance and discussion frequency.

<table>
<thead>
<tr>
<th></th>
<th>Speaking posttest</th>
<th>Writing posttest</th>
<th>Overall score (Skype)</th>
<th>Overall score (Facebook)</th>
<th>Discussion frequency (Skype)</th>
<th>Discussion frequency (Facebook)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking posttest</td>
<td>1</td>
<td>.618**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing posttest</td>
<td>.784**</td>
<td>.492**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall score (Skype)</td>
<td>.450**</td>
<td>.593**</td>
<td>.636**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall score (Facebook)</td>
<td>-.163</td>
<td>-.162</td>
<td>-.330*</td>
<td>-.192</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Discussion frequency (Skype)</td>
<td>.386*</td>
<td>.527**</td>
<td>.231</td>
<td>.465**</td>
<td>-.112</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: *$p < .05$; **$p < .01$. 
Facebook had positive correlations with Facebook discussion quality ($r = 0.465$, $p < 0.01$), indicating that students’ levels of participation on Facebook may improve students’ writing skills in asynchronous discussion and on the posttest.

With respect to Skype, even though this platform when used in EFL learning may enhance speaking skills, the data showed that the discussion frequency in Skype had a negative correlation with the overall score in Skype ($r = -0.330, p < 0.05$) and had non-significant negative correlations with the speaking scores on the posttest. This may suggest that the frequency in Skype speaking is less important as a factor in learning performance.

It should be noted that there was a positive correlation between the speaking and writing posttests and the Facebook overall discussion quality score. Although speaking was not part of the Facebook activities, it had a positive correlation with the overall score. Moreover, there was also a positive correlation between the speaking and writing posttests and the Skype overall discussion quality score. This finding also indicated that learners’ discussion quality, not only the writing quality on Facebook but also the speaking quality in Skype, related to the learning effects of the writing and speaking on the posttest to a certain degree, thus demonstrating that this integrated environment helped to promote the writing and speaking skills simultaneously. Furthermore, there was a positive correlation between writing and speaking skills. With respect to levels of participation, levels of participation on Facebook had a positive influence on students’ learning effects; however, levels of participation on Skype had a negative correlation on students’ learning effects, indicating that those who posted more messages in Skype discussion activities were not shown to necessarily increase their learning.

Through the aforementioned performance and correlation analysis, we realized that the strategy of using role-playing scenarios combined with Skype and Facebook in EFL learning may contribute to higher quality discussions and enhanced learning performances.

### 3.3. Content analysis

We qualitatively analyzed the learners through their Facebook text and Skype voice conversations (Skype voice conversations were first converted to transcript) to support the results of the quantitative analysis and understand the reasons for the learners’ improvements through Facebook and Skype activities. Through the analysis of their writing (text) and speaking (voice) conversations, we were able to deduce the following important point. It was found that the learners used peer-to-peer and self-correction techniques. Some peer-to-peer and self-correction examples have been extracted and organized in the following section.

#### 3.3.1. Content analysis of writing process: peer-to-peer and self-correction

The Facebook stage of the study was monitored directly through the platform known as the “Wall,” where all of the groups held their discussions. The “Wall” function served as the meeting venue as well as the meeting recorder. Every conversation in its entirety was recorded and could, therefore, be analyzed in detail. We found learners engaged in many peer-to-peer and self-correction behaviors during the activity through the Facebook learning environment.

Several examples of peer-to-peer correction within the written conversations on Facebook are shown in Table 6. For example, in Table 6, Case I, student 45 corrected his
peer by writing, “if you say heaven then I would understand faster,” giving student 29 a more suitable word to use than “paradise.” In Table 6, Case II, student 29 wrote, “but our boss is W-Y Wei,” and student 21 replied, “why you use ‘but,’” questioning and noting a possible error in student 29’s use of the word “but.” In Table 6, Case III, student 38 wrote, “what do you meen,” and both students 43 and 38 replied, with “mean,” correcting the spelling error of student 38. These instances indicated that during the role-playing scenarios and while interacting in the Facebook environment, students were able to correct each other as a natural process of learning. In the instances of peer-to-peer and self-correction, the students were opened to receiving and providing corrections while conducting conversations on Facebook.

One noticeable difference in the observations between the lectures and the Facebook stage was that the participants appeared to express themselves more freely (Nadzrah & Mickan, 2003) and with less hesitation in the Facebook environment. This increased freedom may be attributed to the absence of any pressure around expressing themselves in person in English. There appeared to be a relatively low level of fear or anxiety throughout the correction processes. Especially in the instances in which one student noted another student’s error in a group conversation, the anxiety levels appeared to be lower than expected.

This natural process of learning also included self-correction. The following example from the Facebook conversations showed evidence of self-correction by the students. In the case of Table 6, Case I, student 29 wrote, “I think I’m in PARADISW” then proceeded to self-correct writing, “PARADISE?” While writing in their conversations on Facebook, the students can see their own mistakes and make the necessary corrections.

<table>
<thead>
<tr>
<th>Case</th>
<th>Student ID</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>29</td>
<td>Hey guys long time no see, the moment when I Liberation, I think I’m in the PARADISW</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>PARADISE?</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>if you say heaven then I would understand faster.</td>
</tr>
<tr>
<td>II</td>
<td>29</td>
<td>but our boss is W-Y Wei</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>he will be responsible for it</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>why you use “but”</td>
</tr>
<tr>
<td>III</td>
<td>38</td>
<td>what do you meen</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>I’m serious!!</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>Meen? What?</td>
</tr>
<tr>
<td></td>
<td>43</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>Just a mistake - -)</td>
</tr>
</tbody>
</table>

3.3.2. Content analysis of speaking process: peer-to-peer and self-correction

When the role-playings were applied to the Skype platform, many instances of peer-to-peer and self-correction were noted (as shown in Table 7). For example, in Table 7, Case I, student 7 searched for a word to replace “discount” by saying “how... how can I say? Um...,” and student 24 replied with “cheaper...hahaha...” Student 7 acknowledges the suggestion and responded, “Yes, cheaper. I think this is the cheapest, uh...is the cheapest price that you can get.” In this example, student 7 was able to accept and
convert the suggested word into the superlative form for a more accurate use of the word.

In Table 4, Case II, student 47 made an error in the sentence by saying “uh... how... can... can you tell me... how kind computer you want to buy?” Student 30 corrected the error by saying, “you mean what kind of computer?” In Table 7, Case III, a student’s listening ability was adjusted by another student. In this example, student 21 said, “yeah, just these two,” and student 6 made a listening error and said “six two?” Student 21 then replied, “uh... just ‘these’ two and we need four.” This showed that peer-to-peer correction can be used beyond the technical aspects of English and used also for listening. The next example showed how peer-to-peer correction may be applied in pronunciation, as well. In Table 7, Case IV, student 42 said, “did you have the bre-ti lite?” Student 27 replied with “bre-ti lite...bre-ti... what? You mean ‘battery life’?” In speaking exercises, peer-to-peer correction became much more versatile when used to correct
beyond grammar and vocabulary, but when applied to listening and pronunciation aspects, as well. Another example of this is in Table 4, Case V, where student 42 said, “ok... can you repeat the piece of it?” Student 27 attempted to adjust for the error with, “repeat... repeat what? Price... price...?”

Considering that these were voice conversations as opposed to written conversations, the students still demonstrated that their anxiety levels were not significantly affected by the voice conversations or by any mistakes made during the conversations. The students were also able to make corrections in ways not possible in written exercises, such as pronunciation and listening skills, via Skype.

There were also cases of self-correction, although fewer in number. One example was shown in Table 7, Case VIII. Student 49 asked, “So, how many days do you need?” Student 22 iterated the question with, “How... how many days do I need?” and student 49 confirmed with “yes.” Confused, student 22 asked, “Days?? What days??” After a few moments, student 22 was able to figure out what student 49 was referring to. “Ok... wait... oh... oh... I see... haha... you mean how many days... do I need... the computer.” In this instance, student 22 seemed slightly confused and needed a longer response time to understand coherently what was heard in the context of the conversation. Given enough time, the student was able to reorient himself and continue the conversation. A notable observation was that the lack of response time allowed in a speaking role-playing exercise may reduce the frequency of self-corrections.

3.4. Attitude analysis

Overall, the participants’ responses to the open-ended attitude questionnaire were positive regarding how the course was conducted and their results. Student 35 commented on the usefulness of this course “because in this activity of role-playing on Facebook, I learn some vocabulary.” Student 49 commented that this course was interesting “because we will find something we have to sell, and when we used English talk with our classmates, it’s really funny.”

The questionnaire asked the students about their peers’ and their own level of English and the effectiveness of the course for their English learning. When asked about their level of English ability, most spoke conservatively and, at times, even critically of their own ability to use English. For example, student 14 commented on his/her own weakness in English when asked to evaluate his/her peers. “Yes, some of my classmates are good in English, they know difficult words and use them. My English is poor, so sometimes I can’t understand.”

When asked to comment on the effectiveness (useful, interesting, motivating) of the course, the responses were overwhelmingly positive. The students noted that the use of Facebook and Skype was a refreshing and interesting way to learn English. For example, student 37 said it was interesting because “I first use English vocabulary to live.” Student 17 also thought it was interesting because “The topic was selling and it was new.” Some students also expressed that the role-playing activities conducted through Facebook and Skype allowed them to feel comfortable communicating with each other while also motivating them. Student 30 said of the role-playing, “It’s very interesting to play as a seller,” and student 09 said it was interesting “because we can work together.”

3.5. Discussion

Based on the pretest and posttest scores, the estimated 10.0% improvement in speaking skills and 11.5% improvement in writing skills represents a significant improvement in
the students’ overall abilities within the period of this course. Although it appears that the participants’ improvements were incrementally similar, the factors that constitute these improvements vary between speaking and writing. Through a correlation analysis of the results, we find that certain aspects of the course had more of an effect on the participants’ improvements than others.

With regard to speaking improvements, we expected that the Skype portion of the instructional activity would have the most pronounced effect. According to Shen and Suwanthep (2011), constructive role-playing has a positive effect on improving students’ speaking in terms of language quality and language production. Role-playing requires the participants to actively partake in their learning as opposed to passively listening to material. In accordance to the theory of constructivism, learning is an interactive and effective process when a learner is actively engaged in the construction of knowledge, rather than when a learner is passively accepting it (Shen & Suwanthep, 2011). With the combination of Skype and a role-playing instructional strategy, the expectation was that the Skype portion of the instructional activity would prove to be the main factor in terms of speaking improvement.

Through the correlation analysis, we found that there were correlations between levels of participation on Facebook and the learning effects on writing; however, there were no positive correlations between levels of participation in Skype and the learning effects on speaking. This result indicated that in the speaking activities on Skype that require instant responses, those who speak more do not necessarily demonstrate better learning effects. The reasons may be because as the learners provide instant responses, they make more errors in grammar and pronunciation (examples are shown in Table 7). Those learners who speak after a suitable period of thinking may produce more highly accurate responses, thus resulting in more positive influences on the learning effects. This result can serve as reference for teachers when they apply and lead students to engage in EFL learning activities within the Skype environment.

Furthermore, we discovered that in this case study, through the assistance and the instructional design of a role-playing strategy on Facebook and Skype, the discussion quality on Facebook and Skype had positive correlations to a certain degree with the learning effects of writing and speaking on the posttest. There was also a positive complementary relationship between the writing and speaking skills, indicating that this integrated learning environment and instructional design have potential for the promotion of EFL learning effects.

To understand more about how the participants improved, we must look more closely at how they improved their writing and speaking skills during the activities. The bulk of their improvements came from peer-to-peer correction in areas ranging from spelling and word choice to grammar and pronunciation. Examples of spelling and word choice came primarily from Facebook conversations, such as those in Table 6. Naturally, the writing activities through Facebook allowed for the correction of spelling. Examples of grammar and pronunciation came primarily from the Skype conversations, such as those in Table 7. Of course, the speaking activities allowed for the correction of pronunciation, which Facebook does not allow for because it is a writing-based function. What is important to take away from these conclusions is that peer-to-peer correction is an essential part of language learning. Allowing mistakes to be made during an activity and with a counterpart addressing those errors provides the participants with the motivation and focus to correct their own mistakes.

All the participants were well familiar with Facebook and Skype platform before the start of the course. High familiarity with these communication tools allowed the
participants to focus on the target language instead of having an additional anxiety due to technology-related stress. A recommendation for EFL instructors would follow to utilize software that is well-known to the students or to devote substantial efforts for instruction how to operate it in case it is new to the learners.

4. Conclusion

The culmination of all of the quantitative, qualitative, and attitude analysis results from this study is meant to advance the understanding of EFL learning and contribute techniques and strategies that can be implemented to improve EFL teaching and learning. The three factors in this study are Facebook, Skype, and the role-playing strategies used via these platforms. First, role-playing offered qualities that allowed the learner to create language actively rather than passively. It had positive effects on the learner’s motivation, and it reduced learners’ anxiety levels, all while cognitively immersing the learning into a context. The synchronous nature of our role-playing activity, as Jauregi and Bañados (2008) noted, forces the students to learn to cope with information gaps and the unpredictability of communication and to share the responsibility to construct a meaningful exchange of ideas. Second, we also discovered that in the online role-playing activity, both Facebook and Skype promoted learning.

Based on our instructional activity that integrated Facebook, Skype, and role-playing, the results represent significant value in the formula used in EFL learning. As Chen (2011) also found, interaction with a computer, as opposed to in-person, creates a less threatening, more comfortable speaking environment. With the right role-playing content, Facebook could be a notably well-rounded platform for EFL applications because, as indicated in the results, Facebook is effective in increasing writing and speaking skills. The combination of the role-playing strategy and the Facebook platform proved to be a very effective combination as an EFL teaching strategy. Therefore, it is suggested that future EFL lesson plans incorporate the use of Facebook in combination with role-playing and that the Skype platform be used as a speaking supplement to the course. Besides the fact that Skype promoted learning, the results also showed that levels of participation on Skype had a negative correlation on students’ learning effects. Potential reason might be that students were eager to express their ideas fast, while less focusing on the correctness of their speech. As other explanations cannot be excluded either, future studies could bring valuable insights regarding this phenomenon.

With respect to additional future research, further study and analysis of the participants’ behavioral patterns would hold significant value. This research employed two CMC platforms (Facebook and Skype) and the results are valid within the limits of their application only. Additional researches could be conducted to verify if the results hold valid in the cases of other SNS tools. It could also be of value to examine the two main CMC platforms (Facebook and Skype) independently to understand and analyze further how each affects the participants’ learning and learning process patterns. To study the use of Facebook or Skype for tele-collaboration purposes involving contacts with real-world experts and its effect on the students’ learning opportunities would be among the other available future research options. As noted by Nagel and Kotzé (2010), we must also pay attention to community building, social networking, and inter-personal relationships as other phases for future research. Overall, we conclude that these CMCs in combination with role-playing could represent a viable and effective EFL teaching strategy in the future.
Acknowledgements

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References


