

## Impact of Google Earth and ePals Models on Perceptions, Research and Oral Presentation Skills

**Hassan Diab**

American University of Beirut  
Vice President for REP  
P.O.Box 11-0236, Beirut, Lebanon

**Ghada Awada**

American University of Beirut  
P.O. Box 11-0236, Beirut, Lebanon

### Abstract

The article reports the findings of a study that investigated the relative effectiveness of the Google Earth and ePals tools in enhancing geographical research and speaking skills of learners enrolled in Study Skills class in a university in Lebanon and on increasing their levels of motivation for conducting research and delivering presentations. The study is based on the assumptions that the integration of Google Earth and ePals provides an excellent opportunity for teachers to improve students' presentation and research skills. Another assumption is that female learners will report a more significant progress than their male counterparts. The study used the pretest- posttest control design. Descriptive statistics were computed, and a series of independent sample and paired samples t-tests and a content analysis of the qualitative data reporting the participants' perceptions of their Google Earth and ePals experience were undertaken. The results of the study indicated that the use of Google Earth and ePals significantly improved the geographical research and oral presentation skills as well as their perceptions towards learning. However, no significant difference in the achievements of males and females was indicated. Implications and further research to examine the interaction of the treatment effects with other contextual variables were reported.

**Keywords:** ePals, Google Earth, presentation proficiency, technology

## 1. Introduction

The Sociocultural Theory of Learning of Vygotsky (1978) and the Situated Learning Theory of Lave and Wenger (1991) endorse the basic principles of online learning as the social experiences determine people's ways of thinking about the world, and education is considered as a sociocultural activity. Social constructivism theory (Von Glaserfeld, 1995) as well as Vygotsky's Theory of Language Development (Vygotsky, 1934/1986) form another theoretical background of the study since knowledge is vigorously acquired through social interaction, and thinking individuals construct knowledge when they interact with others. The Vygotskian Sociocultural Theory indicates that the technology-supported learning environment is determined by the sociocultural context of the classroom and a communicative framework based on achieving higher-order learning outcomes using computers (McLoughlin & Olive, 1998).

Telecollaboration is defined as an online medium of communication comprising tools which connect language learners in many countries for the development of collaborative project work and intercultural interchange (O'Dowd & Ritter 2006, p. 623). E-mail exchanges are significant as they enhance the skills of the learners (O'Dowd, 2003). ePals are vital for language teachers, for they help learners improve writing skills (Kern, 2006). Furthermore, Patterson (2007) asserts that Google Earth can improve teaching geography and help learners enhance their geographic information through using visuals and other methods. Google Earth increases students' geographic awareness while developing critical thinking, problem-solving and inquiry skills (Patterson, 2007).

DiScipio (2008), co-founder of ePals, demonstrates that there should be a thorough needs analysis determining the curriculum-based activities that can be improved through the use of social networking tools. In alignment with the theory of Social Constructivism, ePals ensure that academic content standards will be met. DiScipio (2008, p.10) underscores that a social learning network includes creative pedagogy through internet-connected communities, digital means, and information communication technology (ICT) tools that allow students to master the curriculum and to learn subjects beyond the classroom.

On the other hand, Nozawa (2002) notes that unsatisfactory findings were reported upon the implementation of a keypal exchange as a supplementary activity, where some students (66%) could not sustain the engagement in regular correspondence for the whole semester, and 63.9% of the students couldn't carry on their key pal relationship since students were dissatisfied with the difficulty of the project and/or keeping a key pal. However, as for the gender variable, Awada and Ghaith (2014) report that the results of a study which investigated the effect of using WebQuest technological tool on enhancing the Business writing skills of the participants, underscore that "...the female participants outperformed their male counterparts on writing achievement  $F(1, 36) = 15.90, P = 0.00, \eta^2 = 0.30$ " (p.11).

### 1.1 The Present Study

The present study was conducted at a private university in the Middle East where English is used as the medium of instruction. Studying English as a foreign language (EFL) in the context of this study is significant due to the fact that English is deemed as an international language used extensively in different domains including communications. At present, there are no previous studies which examined the effect of the Google Earth and ePals combined treatment

in improving geographical research and speaking proficiency of learners enrolled in a class in a university in the Middle East and on increasing their levels of motivation for delivering presentations. The study is based on the rationale that there is a scarcity or non-existence of research on the use and integration of Google Earth and ePals in EFL classes.

Specifically, the study addressed the following questions:

1. What is the relative effect of using Google Earth and ePals educational tools in comparison with traditional research paper on improving the research skills of university learners of EFL?

2. What is the relative effect of using Google Earth and ePals educational tools in comparison with traditional research paper on improving the oral presentation of university learners of EFL?

3. Is there a significant progress difference in favor of university female learners of EFL versus male learners using the Google Earth and ePals to improve the research skills and oral presentation proficiency?

4. What are the perceptions of the participants in the experimental group of their experience in using the Google Earth and ePals technological models in their class?

The following null hypotheses were formulated and tested in order to address the questions raised in the study:

Ho 1: There is no statistically significant difference in the posttest research skills scores of the experimental and control group at the  $p \leq 0.05$  alpha level.

Ho 2: There is no statistically significant difference in the posttest oral presentation scores of the experimental and control group at the  $p \leq 0.05$  alpha level.

Ho3: There is no statistically significant difference in the posttest of research skills and oral presentation scores of the females versus males in the experimental group at the  $p \leq 0.05$  alpha level.

Ho 4: There is no statistically significant difference in the perceptions of the participants in the experimental group of their experience in using the Google Earth and ePals technological models in their class.

## 2. Literature Review

Technology may contribute to promoting learners' autonomy. Instruction given through machines and devices is extremely significant as it provides each learner with the opportunity to work at his/ her pace; subsequently, it will be developing learners' autonomy (Bello, 2014, Skinner, 1968).

An ePal exchange between Japanese university students and Danish high school students showed a high level of interest from the students as well as an increased motivation for writing (Fedderholdt, 2001). In the same vein, Van Lier (2000) states that students "...can learn best from negotiating with a native speaker or a more competent interlocutor, presumably because knowledge has to come from one who knows or can do more" (p. 248).

Unlike behaviorism, constructivism, as humanistic model, proposes that learning is a process by which learners build new ideas or perceptions by making use of each other's' knowledge and experiences. The learners would have greater control and accountability over what they learn and depend on schema to choose and convert information, generate hypotheses and make decisions (Beatty, 2003, p. 91). In alignment with Levy (1997), Beatty (2003) states, "It is

important that, in a restricted time frame, learners do not abrogate the task of thinking and take advantage of a software program's willingness to supply default answers" (p. 89). E-mail, bulletin boards, discussion threads and chat rooms are technology enhanced language learning tools that allow learners to reveal critically and to scaffold ideas (Wiesenberg, 1999). The computer-assisted language learning tools may result in increased collaboration and inquiry-based learning (Brush & Uden, 2000). E-mail is one technological application that has been used creatively in the language classroom to create online communities. Email can motivate learners to utilize the computers in authentic situations in order to improve communicative and cognitive abilities (Duncan & Leander, 2001).

Warschauer (1996) and Kannan & Macknish (2000) assert that online communication increases motivation. Computer-mediated communication could result in the improvement of writing (Warschauer, Turbee & Robert, 1996; Brush & Uden, 2000; Karyan & Crowe, 1997; and Harasim, 1994). E-pals would facilitate the enhancement of the cultural, language and computer knowledge and would help learners to know their own culture and the culture of others (Lave & Wenger, 1991). An increasingly bizarre world means more prospects for multicultural experience. Online experiences improve face-to-face involvements, and vice versa (Branzburg, 2002, p.3).

In agreement with the abovementioned researchers, Green and Bauer (2001) add that communities around the world which were remote in the past are becoming contributors in the International crossroads; the need for international capability is developing in unforeseen spaces (p. 16). More importantly, Leu (2000a) asserts the significance of technology as the mainstream of problem-solving and inquiry-based tools required to address the future literacy needs in our society and the subsequent relationship to technology. Leu (2002) and Morrow & Gambrell (2001) have reported the significance of electronic communication and Electronic discourse communities which increase learners' motivation and facilitate written language tasks. Similarly, Neilsen (1998) notes the significance of high school pen pal program which improves literacy and promotes problem-solving learning. Charron (2005) also asserts that learners problem solve in written-language activities while participating in the Internet pen pal program especially when lack of comprehension occurs, and they write back asking questions for clarification. As such, pen pal's comprehension of their writing urges learners to write, inquire, evaluate, judge and revise their writing. Above all, Lankshear, Snyder, and Green (2000) report the significance of the social nature of learning in enhancing the written-language acquisition. Burniske and Monke (2001) also corroborate the significance of the tellocollaborative projects as "...a forum for student expression, a forum that nurtures exploratory discourse rather than the recitation of homogenized thought" (p. 57). In the same vein, Harp and Brewer (2005) assert the significance of having constructive feedback from different audiences for learners who seek the improvement of their writing.

On the other hand, Nicholson (2005) asserts the importance of using Google Maps and Google Earth as being efficient tools which enable people to think, learn, and work with geographic information. Nicholson (2005) highlights the huge assistance of Google Earth in providing users with access to spatial and cultural information required for understanding their world and their communities. Google Earth provides the customizable map features and dynamic presentation tools which improve presentation skills and provide easy access to information. One

more appealing feature of Google Earth applications is the tremendous ability to share projects, create customized Keyhole Markup Language(KML) files, and to report findings in a geographic context. With Google Earth's ease of use and visualization capabilities, geographic information will be integrated into all subject matters.

Google Earth is a geography discovery tool which provides visualization features and valuable learning opportunities for teaching in a 3D space. The implementation of Geographic Information Science (GIScience) applications is useful for teaching fundamental geographic concepts( Patterson, 2007). The use of Google Earth supports spatial thinking and develops critical analytical skills (Committee on the Support for the Thinking Spatially 2006, xiii). "Google Earth has limited capabilities and tools to support true spatial analytical operations. The tool does not have a query capability or the functionality to perform complex spatial operations—even in the non-freeware versions"( Patterson,2007,p.147).

Meyer *et al.*( 1999) assert that Google Earth helps strengthen and remedy the weaknesses in geography curriculum. Educators are also urged to incorporate the use of Google Earth in the teaching and learning processes so that they use Google Earth to prepare authentic materials and to provide sufficient time for students to learn how to use software and incorporate the tool in their learning experiences.

Google Earth helps learners work independently on an interactive basis while also collaborating with others. Google Earth is an Internet-based resource which can be incorporated into the learning environment to provide learners with interesting knowledge. Technology might widen learners' knowledge and improve their thinking and analytical skills, for technology can enable learners apply external learning to situations presented within the classroom (Leamson,1999).

The use of Google Earth facilitates learning inside and outside the classroom (Cates *et al.* 2003:155) as it allows students to *explore* the geographic location they are seeking to describe what they identify and *evaluate* the interpretations of what they are learning. The applications and features of Google Earth facilitate the dynamic and interactive exploration of earth. Solem and Gersmehl(2005) report the usefulness of the online resources which helped to improve student comprehension of concepts and skills and to increase learners' confidence in their knowledge of geographic issues .

However, the use of Google Earth is hindered by some constraints. Google Earth is a freeware tool which requires a strong Internet access with fast connection. As such, the insufficient Internet access and power would hinder the usefulness of Google Earth in the classroom as learners might lose interest in the tool should Google Earth become non-responsive to the user's requests. It is also imperative for learners to use the application of Google Earth and its related sites to create their own accounts to search for data not included in Google Earth and then to be able access the dataset once a desirable dataset is found.

Patterson (2007) notes many advantages of the use of Google Earth, for Google Earth increases learners' motivation as it provides them with entertainment while learning. Moreover, Google Earth is accessible for everyone for it has a free downloadable version. Google Earth

provides learners with appealing visuals and images "...thus allowing students to utilize the application outside the educational atmosphere and not be subject to licensing requirements many commercial off-the-shelf Geographic Information System (GIS) applications impose (Patterson,2007,p.148).More importantly, Google Earth provides applications such as the Google Earth Community and Google's Keyhole mapping services which display a diversity of data layers consisting of supplementary readings and supporting photos and videos. Patterson(2007) adds:

There are also increasingly more services available to Google Earth with streaming media.....Keyhole BBS not only provides data but it also serves as a collaborative discussion forum for users to discuss data implications and evolution, as well as peripheral ideas (p.148).

Thomas *et al.*( 1998) also notes, "Atlases have long provided people with a visual representation of their world and have encompassed a wide variety of topics"(p. 202).Google Earth provides the learners with the uses of Atlases in addition to extending the interactive components in apparently endless dimensions. However, unlike Atlases, Google Earth provides collaborative forum through the Keyhole Bulletin Board System (BBS). Google Earth provides the user with information related to a place, increases the level of interactivity and enhances the user's experience as a novice explorer. Patterson(2007) explains that Google Earth "...is not a true GIS, users do not need to learn the interfaces or particular nuances of desktop GIS applications that may require special skills"(p.149).Patterson(2007) adds that Google Earth's interface is simpler than Atlases due to the limited variety of functions. The application is directed:

Toward more point-and click operations without complex menus and tools; non freeware versions provide a relatively powerful capability to develop and enhance functionality. With a simpler interface, Google Earth also has less complex functionality and cartographic capabilities than true GIS applications, which should require significantly less time for teacher training (p.150).

Using Google Earth, the teachers can plan lessons which help learners understand the natural and cultural phenomena while using an interactive tool with vital applications and features critically explaining the place, movement, and regions (Natoli *et al.* 1984).

Awada and Ghaith( 2014) add, "... the results of the study suggested that female learners outperformed their male counterparts in writing achievement" (p.14).Peterson &- Kennedy ( 2006) assert that female learners outperformed in writing their male counterparts as shown in teacher's feedback to females versus males. Haswell & Haswell(1995) indicate that there were no significant differences in the writing achievement of female and male learners although teachers gave more comments about syntactic changes to males than to females. The Michigan Department of Education (2006) also asserts that female learners outperformed their male counterparts in reading and writing at grades 3, 4, 5, 7 and 8,and the U.S. Department of Education (NCES, 2006b) pointed out that female learners outperformed male learners in language arts. However, the research of Jones and Myhill (2004) shows no significant evidence at skills level between female and male learners.

### 3. Methodology

The study used a pretest- posttest control design. Two intact classes were randomly assigned to control and experimental conditions and the treatment continued for six weeks of instruction at the rate of 4 class periods per week to teach the geographical research and communication and presentation skills aiming at raising cultural awareness and developing critical thinking abilities.

#### 3.1 Participants

The study was conducted in a private leading university in the Middle East. A convenient sample total of 48 EFL learners participated in the study. The participants were randomly assigned to control and experimental conditions, and the experimental group sample included a total of 19 males and 8 females whereas the control group samples included 15 males and six females. All the participants are native speakers of Arabic and came from similar socio-economic backgrounds. The participants were studying study skills including research and communication skills at a rate of four hours per week in accordance with the curriculum requirements proclaimed by the university program. A total of 48 students had been assigned the successful fulfillment of the Study Skills course as one of the four-course program. The two fundamental requirements of the course are delivering oral presentation and conducting a research paper aiming at developing the cultural awareness and the cognitive skills of the learners. The participants are students whose GPA is low and only upon the completion of the requirements of the four courses, they will be eligible to get back to the regular program of the university. Finally, there were 21 students in the control group and 27 in the experimental group, and the age of the participants ranged from 19- 23 years.

#### 3.2 Research Context

As indicated earlier, the research context of the present study is a private university in Lebanon. This context is characterized by enrolling students from different socio-economic background with good opportunities to use English for communication in daily life and outside of university. However, the importance of studying English is emphasized in the context of the present study, as a language of instruction in which all other university subjects are taught. This is because English is considered an important international language in Lebanon to be studied starting with kindergarten and up to postgraduate studies due to its recognized value in communication and education. Above all, it should be noted that the majority of students in this study context, as well as in other private university contexts, can be considered largely as good English proficient learners with much access to computers and modern technology, especially computers are available and used in all the classes of many private universities including the site of the present study.

#### 3.3 Instruments

Three instruments were used to collect data and measure the variables of geographical research, oral presentation proficiency, gender, and perception under investigation. These included an oral presentation, research rubrics and reflection logs. The oral presentation and research rubrics were used to measure the pre- and post-tests of oral presentation proficiency and research skills level of the participants in the control and experimental groups. Finally, reflection logs investigated the participants' perceptions of their experience in using the Google Earth and ePals.

### 3.4 Treatment

The treatment lasted for six weeks at the rate of four contact hours of instruction per week. The study participants of both the control and experimental group were asked to conduct and present a project which required conducting research pertinent to the touristic sites found in the South and the North regions of Lebanon. The project writing and presentation instructional components of the control group consisted of traditional research writing and PowerPoint presentation practices which required instruction in the different steps of the project and presentation processes. Specifically, the geographical research and PowerPoint presentation stages focused on guiding the learners to explore their topics in order to generate ideas in addition to learning how to write up and present their ideas after revising their written and presentation products. Meanwhile, the experimental group participants received instruction integrating the use of ePals and Google Earth in conducting the geographical research and delivering the presentation conveying cultural awareness. The experimental group participants were taught how to create ePals accounts and Google Earth technological models using Googleearth.com. Participants were given directions to use Google Earth and ePals. The experimental group learners practiced project writing through using the Google Earth and ePals procedures which involved using computers to incorporate land masses, bodies of water, and other physical features of Earth on maps and globes, pictures, visual effects, and the design they like. The participants were given directions to obtaining a Gmail account, accessing Google Earth, navigating in Google Earth and to using the Dashboard. The Tours included audio podcasts and pictures. Experimental group participants were able to research the important features and characteristics of the touristic sites found in the South and the North of Lebanon, locate on Google Earth the home cities, buildings or establishments, countries of each, create Google Earth tours exploring the local community, state, or world. The participants were also able to create ePals to learn about the culture and the historical sites of the community through class discussions, collaborate with a neighboring community classroom by exchanging the identified historical sites and the problems encountering tourism inside the two countries and create a solution to that neighboring classrooms tourism problems through three digital, written, collaboration with community members. The participants were asked to use a rubric for evaluating their Google Earth findings.

The experimental group participants were also given directives to using 'Google.com', accessing ePals.com, starting collaborative projects, and using forums and learning resources to exchange information and to raise their cultural awareness while exploring the touristic sites found in the South and the North regions of Lebanon. Participants were encouraged to use rubric for assessing and evaluating their ePals Projects. It is worth noting that the experimental group participants were in turn divided into two groups; one representing the South regions consisting of 14 members and one representing the North regions consisting of 13 members, and they were exchanging ePals e-mails inside and outside the classroom. Each group had a leader who also represented one of the two University campuses; Beirut and Byblos ones. The instructor of the class acted as a facilitator for both groups.

The addressed Technology (ISTE) Standards for Students were as follows:

1. Creativity and Innovation: Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

2. Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

3. Research and information fluency: Students apply digital tools to gather, evaluate, and use information.

4. Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions

### 3.5 Data Analysis

Descriptive statistics (Means and Standard Deviations) were calculated on the pre-test and post-test performance scores of participants in the control and experimental groups, following which two independent sample t-tests and two paired samples t-tests were conducted to investigate the differences in geographical research skills, oral presentation proficiency and gender prior to and subsequent to the intervention between the groups of learners in the control and experimental groups. The treatment conditions (control vs experimental) were used as an independent variable and geographical research, oral presentation proficiency and gender as dependent variables.

Additionally, content analysis was employed as the method of data analysis of the qualitative data collected from learners' written reflection logs about their perceptions of the Google Earth and ePals experiences. The reflection logs were employed to write up the study results regarding participants' perceptions.

## 4. Results

### 4.1 Findings on geographical research skills, oral presentation proficiency and gender progress

We found that, prior to intervention; there was no significant difference in the geographical research proficiency of the participants in the control and the experimental groups. Conversely, after the intervention, the experimental group outperformed the control group, which suggests a very significant improvement in geographical research proficiency from an educational point of view. Therefore, the first null hypothesis of the study concerning difference in the posttest geographical research-performance of the control and experimental group was rejected (see *Table 1, Table 2*).

**Table 1 Treatment Conditions**

Dependent Variable: **Posttest Research Project**

Treatment Conditions	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	11.156 <sup>a</sup>	.349	10.451	11.860
Experimental	14.073 <sup>a</sup>	.301	13.465	14.681

a. Covariates appearing in the model are evaluated at the following values: **Prettest Research Project = 11.0000.**

Table 1 shows descriptive statistics of research project posttest scores of the control group ( $M=11.156^a$ ,  $SD=.349$ ) and the experimental group ( $M=14.073^a$ ,  $SD=.301$ ). An independent-

samples *t*-test was conducted using an alpha level of .05 in order to examine whether the experimental group and the control group differed significantly in the pretest scores.

**Table 2 Pre and Posttests Research Project**

Treatment Conditions * Gender		95% Confidence Interval			
Treatment Conditions	Gender	Mean	Std. Error	Lower Bound	Upper Bound
Control	Male	11.018 <sup>a</sup>	.374	10.265	11.772
	Female	11.293 <sup>a</sup>	.585	10.113	12.474
Experimental	Male	14.072 <sup>a</sup>	.340	13.387	14.757
	Female	14.075 <sup>a</sup>	.509	13.048	15.101

a. Covariates appearing in the model are evaluated at the following values:

**Pretest Research Project= 11.0000.**

Table 2 shows descriptive statistics of research project posttest scores of the Males in control group ( $M=11.018^a$ ,  $SD=.374$ ) and the scores of the females in control group ( $M=11.293^a$ ,  $SD=.585$ ) and the scores of the males in experimental group ( $M=14.072^a$ ,  $SD=.340$ ) and the scores of the females in experimental group ( $M=14.075^a$ ,  $SD=.509$ ).

After the intervention, the experimental group outperformed the control group, which suggests a very significant improvement in oral presentation proficiency from an educational point of view. Therefore, the null hypothesis of the study concerning difference in the posttest oral presentation proficiency of the control and experimental group was rejected (See Table 3, Table 4 and Table 5).

**Table 3 Posttest Oral Presentation**

Dependent Variable: Posttest Oral Presentation				
Treatment Conditions	Gender	Mean	Std. Deviation	N
Control	Male	10.8667	1.84649	15
	Female	10.1667	1.72240	6
	Total	10.6667	1.79815	21
Experimental	Male	13.9474	1.39338	19
	Female	15.0000	.75593	8
	Total	14.2593	1.31829	27
Total	Male	12.5882	2.21726	34
	Female	12.9286	2.75860	14
	Total	12.6875	2.36244	48

Table 3 shows descriptive statistics of Oral presentation posttest scores of the Males in control group ( $M=10.8667$ ,  $SD=1.84649$ ) and the scores of the females in control group ( $M=11.293^a$ ,

$SD=1.39338$ ) and the scores of the Males in experimental group ( $M=13.9474$ ,  $SD=1.39338$ ) and the scores of the females in experimental group ( $M=15.0000$ ,  $SD=.75593$ ).

**Table 4 Gender**

Dependent Variable: **Posttest Oral Presentation**

Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	12.518 <sup>a</sup>	.206	12.101	12.934
Female	12.353 <sup>a</sup>	.324	11.700	13.007

a. Covariates appearing in the model are evaluated at the following values: **Pretest Oral Presentation = 10.9375.**

Table 4 shows descriptive statistics of oral Presentation posttest scores of the Males ( $M=12.518^a$ ,  $SD=.206$ ) and the scores of the females ( $M=12.353^a$ ,  $SD=.585$ )

**Table 5 Pre and Posttest Oral Presentation**

Dependent Variable: **Posttest Oral Presentation**

Treatment Conditions	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	10.548 <sup>a</sup>	.287	9.969	11.128
Experimental	14.323 <sup>a</sup>	.252	13.814	14.831

a. Covariates appearing in the model are evaluated at the following values: **Pretest Oral Presentation = 10.9375.**

Table 5 shows descriptive statistics of oral presentation posttest scores of the control group ( $M=10.548^a$ ,  $SD=.287$ ) and the experimental group ( $M=14.323^a$ ,  $SD=.252$ ).

There is no statistically significant difference in the posttest of research skills and oral presentation scores of the females versus males in the experimental group at the  $p \leq 0.05$  alpha level (See **Table 6**).

**Table 6 Treatment Conditions and Gender**

Dependent Variable: **Posttest Oral Presentation**

Treatment Conditions	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Control	Male	11.063 <sup>a</sup>	.309	10.439	11.687
	Female	10.033 <sup>a</sup>	.486	9.053	11.014
Experimental	Male	13.972 <sup>a</sup>	.273	13.422	14.523

Female	14.673 <sup>a</sup>	.425	13.816	15.530
--------	---------------------	------	--------	--------

a. Covariates appearing in the model are evaluated at the following values:

**Pretest Oral Presentation= 10.9375.**

Table 6 shows descriptive statistics of oral presentation posttest scores of the Males in control group ( $M=11.063^a$ ,  $SD=.309$ ) and the scores of the females in control group ( $M=10.033^a$ ,  $SD=.486$ ) and the scores of the Males in experimental group ( $M=13.972^a$ ,  $SD=.273$ ) and the scores of the females in experimental group ( $M=14.673^a$ ,  $SD=.425$ )

The experimental group participants learned how to employ Google Earth to explore the features of the historical sites found in the South and the North of Lebanon. *Google Earth* helped the participants to fly and explore any place on earth and any spot they wanted. Participants used remotely sensed images to recognize land use patterns of diverse areas in the world. They examined and interpreted the time-sequenced satellite data and aerial photographs. Participants used a Google Earth assessment rubric to critique their products.

Creating ePals helped *participants* to exchange information about the language and the cultures. *Participants* used the ePals to carry out the requirements of the project and accordingly prepared brochures about different tourist attractions in Lebanon. The participants employed the ePals products such as ePals Global Community, School Mail, Learning Space, and In2Books to prepare the brochures about the attractions in the South and North of Lebanon. With ePals Global Community, the participants could access the community to find collaborative projects, join discussions in the community forums, and search thousands of classroom profiles to engage with others in authentic exchanges in an online environment (See **Figures 1. & 2**). *Using ePals, learners* developed knowledge about the historical sites of their community through class discussion.

#### 4.2 Findings on Perceptions of Google Earth and ePals Presentation Experience

We found that, prior to intervention, there was no significant difference in the oral presentation proficiency of the participants in the control group and the experimental group.

Conversely, after the intervention, the experimental group outperformed the control group, which suggests a significant improvement in proficiency from an educational point of view. Therefore, the first null hypotheses of the study regarding difference in the posttest oral performance and research skills of the control and experimental group were rejected. However, the null hypothesis of the study regarding difference in the posttest gender performance of the experimental group was accepted, for the female learners didn't show more progress than that yielded by their male counterparts.

The results of the content analysis of qualitative data from reflective logs about learners' experience with the Google Earth and ePals suggest three aspects of interest: 1) the importance of using Google Earth in conducting geographical research process, 2) the usefulness of ePals in exchanging information, raising cultural awareness and improving writing skills and 3) the significance of Google Earth and ePals educational tools in teaching EFL presentation skills, in general, and project presentations in particular. Specifically, the theme of the significance of the

Google Earth and ePals emerged from the data as many learners in the experimental group expressed their positive perception of this experience.

The eight female learners' reflection logs were as follows: "Google Earth is an amazing application to have pictures of places." Another female learner noted, "Google Earth provides us with accurate information related to different locations and it is easy to use." A female learner noted, "ePals allowed us to access many projects and gave us access to useful material."

The majority of the male and female learners were in favor of the use of Google Earth and ePals. A female learner noted, "Google Earth and ePals are fun to use and make things much easier for students. Google Earth and ePals have many good features that help us to get connected with many people who can give a lot of useful information." A female learner added, "Google Earth is easy to access and it provides us with a lot of information about the various places of the world." Another female learner added, "Google Earth made me discover the features of this useful application. Google Earth enabled us to have tours to many places and showed us that many people all over the world can use this application because the tours, travels and everything can be found in different languages and can be easily accessible without any trouble." A male learner added, "Google Earth is a useful technological tool because it can show us anyplace we want to see and we don't have to actually travel to anyplace." Another male learner noted, "Exploring places, buildings, and information about many regions can be done in no time." A learner noted, "Google Earth helped us do the project quickly and the tours were fun." However, a male learner pointed out, "One needs much time to upload pictures on Google Earth; one can't find updated information for some regions and downloading pictures is a trouble."

Concerning ePals, a learner noted, "...ePals connects learners from all over the world through emails. ePals made us chat with each other and learn more about the touristic places and we could send each other a lot of information and pictures." A second male learner noted, "ePals provide students with access to good projects, games, and rewards." A learner added, "one should have an account and Internet to access ePals." Another male learner noted, "ePals has many functions and useful features." A learner pointed out, "Google Earth and ePals help us to find many places easily and we were quick to find the touristic sites and buildings. A learner added, "ePals improves communications and we could access resources and libraries."

Some male learners mentioned some weaknesses for the use of Google Earth and ePals. "Google Earth exposes us to many locations at the same time, so one can easily get lost searching for a certain place in Lebanon. Another learner added, "Google Earth doesn't give information about all places." A male learner wrote, "Google Earth, doesn't give details about all the places we want." A male learner also added, "ePals provide access to a library, games and writing center." On the other hand, a learner wrote, "ePals are not easy to use." Also, a male learner added, "Google Earth gives some inaccurate information. One can't access Google Earth without internet access." A female learner said, "Google Earth doesn't always give recent pictures because anyone can add pictures."

## 5. Discussion

The present study examined the relative effectiveness of the Google Earth and ePals technological tools in improving EFL geographical research and oral presentation proficiency and perceptions. As discussed earlier, the results proved to be positive given that the learners who produced EFL presentations using the Google Earth and ePals outperformed their counterparts who produced the same content according to the dynamics of traditional research paper presentation. These findings corroborate those of Kern(2006), Lankshear, Snyder, and Green (2000), Burniske and Monke (2001), Harp and Brewer (2005) reported that ePals are vital for language teachers, for ePals help learners improve writing skills.

The findings of the study also corroborate those of Nicholson (2005), Thomas *et al.*(1998), Patterson(2007)and Solem and Gersmehl (2005) who assert the importance of using Google Maps and Google Earth as being efficient tools which enable people to think, learn, and work with geographic information. However, Patterson(2007) reports constraints of using the Google Earth as having limited capabilities and tools to support true spatial analytical operations.

A probable explanation of the effectiveness of the Google Earth and ePals and the positive attitudes towards the Google Earth and ePals projects and presentations could be attributed to the opportunities for students to conduct a geographical research and oral presentations with reference to land masses, bodies of water, and other physical features of Earth on maps and globes, pictures, and visual effects. The participants were also able to learn about the culture and the historical sites of the community through class discussions, collaborate with a neighboring community classroom by exchanging the identified historical sites three digital, written, collaboration with community members.

Google Earth and ePals facilitate the teacher's preparation and save the time that can be tremendously shortened since many datasets are freely available through the "Keyhole BBS", along with the discussion forums which can assist the learners to evaluate the data's accuracy and applicability. As such, using Google Earth and ePals, the teachers can emphasize the basic concepts and key ideas of the lessons and not to spend much time on the mechanics of the application itself. Using Google Earth to collect, analyze, and interpret data, the learners critically and logically think to answer questions through scientific investigations. The use of Google Earth and ePals in the classroom provides the learners with the commonly posts data of the most current impact on its main Web page. The photos and the video posted by Google Earth can show the event, help students learn about the current event, view, and write analyses of its implications, which provide students with an implied understanding of spatial information while promoting the critical thinking, analysis, and writing skills.

However, future research should be conducted involving representative samples of different EFL populations and grade levels in order to determine to what extent the findings of the present study are generalizable as well as determine the effect of context-specific factors such as linguistic composition and levels of first and foreign language proficiency on the interface of technology and language proficiency and dispositions.

The present study revealed that university Study Skills learners were generally motivated about the Google Earth and ePals project and oral presentations. Students also responded that the

Google Earth and ePals project has raised their self-esteem, and they were more willing to express themselves using EFL.

## 6. Limitations

The present study used a comparatively subject-limited and convenient sample size, which has negative implications for the generalizability of the findings into other contexts. The generalizability of the findings requires further research and a larger, more representative sample size in order to examine the interaction of the treatment effects-with other contextual variables such as students, level of language proficiency and technology apprehension.

## 7. Conclusion

This article reports the findings of an experimental study that investigated the relative effectiveness of the Google Earth and ePals as computer-assisted language learning tools versus traditional research paper in improving the EFL geographical research and oral presentation skills. The findings of the study revealed that the Google Earth and ePals tools as a combined treatment may boost students' motivation and interest in project presentations as well as improve their oral proficiency. It is probable in the future, that Google Earth and ePals as Computer Assisted Language Learning tools will remain to be useful tools in teaching geographical research and presentation skills. The results of the study indicated that the use of Google Earth and ePals significantly improved the geographical research and oral presentation skills as well as their perceptions towards learning. However, no significant difference in the achievements of males and females was indicated. As such, language teachers should be cognizant of how the integration of technology and Google Earth and ePals into the classrooms can enhance language teaching and learning as well as increase learners' motivation to learning.

### About the Authors:

**Dr. Hassan Diab** has over 130 publications. His active encouragement and innovative use of ICT in education during his term as Minister of Education and Higher Education in the Lebanese Cabinet has led to the Government of Lebanon to be the winner of the GSMA 2014 Connected Government Award.

**Dr. Ghada Awada** is an author of textbooks and articles. Her research interests focus on teacher education, improving English language skills and on applications of technology in language teaching and learning.

## References

- Awada, G. M., & Ghaith, G. M. (2014). Impact of WebQuest and Gender on Writing Achievement in Professional Business English. *Taiwan International ESP Journal*, 6:2, 1-27
- Beatty, K. (2003). Teaching and researching computer-assisted language learning. *Applied Linguistics in Action series*. Essex, England: Pearson Education Limited.

- Bello, A. A. (2014). *Impact of Technology Interventions on Student Achievement in Rural Nigerian Schools*. Walden Dissertations and Doctoral Studies.
- Branzburg, J. (2002). Reaching around the globe. *Technology & Learning* 23, (4), 1- 4.
- Burniske, R.W., & Monke, L. (2001). *Breaking down the digital walls: Learning to teach in a post-modern world*. Albany: State University of New York Press.
- Brush, T.A., & Uden, L. (2000). Using computer-mediated to enhance instructional design class: A case study. *International Journal of Instructional Media*: 27(2) 157– 164.
- Cates, W. M., B. Price, & Bodzin, A. M. (2003). Implementing technology-rich curricular materials: Findings from the exploring life project. In *Technology in Education: A Twenty-Year Retrospective*, eds. D. Lamont Johnson, and Clebome D. Maddux. New York: Haworth Press.
- Charron, N. (2005). *Talk at the terminal: The relationship between the use of an internet pen pal program and fourth graders' written language development and attitudes towards writing*. Doctoral dissertation, University of Massachusetts Lowell.
- Committee on the Support for Thinking Spatially. (2006). *Learning To Think Spatially: GIS as a Support System in the K-12 Curriculum*. Washington, D.C.: The National Academies Press.
- DiScipio, T. (2008). Adapting social networking to address 21st-century skills. *MultiMedia & Internet@Schools*, 15(5), 10-11.
- Duncan, B. & Leander, K.M. (2001). *Constructing maps for the new promised land: learning, community and the Internet*. University of Illinois, Urbana-Champaign Fedderholdt, K. (2001). An email exchange project between non-native speakers of English. *ELT Journal*, 55 (3), 273-280.
- Green, M. & Bauer, M. (2001). Global learning in a new age. *Chronicle of Higher Education*. 48, No. 11, p. 24(B).
- Gersmehl, P. (2005). *Teaching Geography*. New York: The Guilford Press.
- Harasim, L. (1994). From Cyberspace to Human Space. *Update Newsletter*, 6(3).
- Harp, B., & Brewer, J. (2005). *The informed reading teacher: Research-based practice*. Upper Saddle River, NJ: Pearson, Merrill Prentice Hall.
- Haswell, R. H., & Haswell, J. E. (1995). Gendership and the miswriting of students. *College Composition and Communication*, 46(2), 223-254.
- Jones, S. & Myhill, D. (2004). Seeing things differently: teachers' constructions of underachievement, *Gender and Education*, 16 (4), 531-546.
- Kannan, J and Macknish, C. (2000). Issues affecting online ESL learning: A Singapore case study. *Internet TESL Journal*: 6(2)
- Karyan, S. And Crowe, J. (1997). Student perceptions of electronic discussion groups. *THE Journal*: April Issue 1-4.
- Karchmer, R.A. (2001). The journey ahead: Thirteen teachers report how the Internet influences literacy and literacy instruction in their K–12 classrooms. *Reading Research Quarterly*, 36, 442–466.
- Kern, R. (2006). Perspectives on technology in learning and teaching languages. *TESOL Quarterly*, 40(1), 183-210.
- Lankshear, C., Snyder, L., & Green, B. (2000). *Teachers and technoliteracy: Managing literacy, technology and learning in schools*. St. Leonards, Australia: Allen & Unwin.
- Leu, D.J. (2000a). Literacy and technology: Deictic consequences for literacy education in an information age.

- Lave, J. & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral participation*. Cambridge, England: Cambridge University Press. Volume 29, 2, 2005
- Leu, D. J. (2001). Exploring literacy on the internet: Internet Project: Preparing students for new literacies in a global village. *The reading teacher*, 54(6), 568-572.
- Leamson, R. (1999). *Thinking About Teaching and Learning: Developing Habits of Learning with First Year College and University Students*. Sterling, Virginia: Stylus
- Levy, M. (1997). *Computer-assisted language learning. Context and conceptualization*. Oxford: Oxford University Press.
- Meyer, J. W., Butterick, J., Olkin, M., & Zack, G. (1999). GIS in the K-12 curriculum: A cautionary note. *The Professional Geographer*, 51(4), 571-578.
- McLoughlin, C. & Oliver, R. (1998). Maximising the language and learning link in computer learning environments. *British Journal of Educational Technology* 29(2).
- Morrow, L. M., & Gambrell, L. B. (2001). Literature-based instruction in the early years. *Handbook of early literacy research*, 1, 348-360.
- National School Boards Association. (2007). Creating and connecting: Research and guidelines on online social—and educational—networking. Retrieved January, 2, 2007.
- Neilsen, L. (1998). Coding the light: Rethinking generational authority in a rural high school telecommunications project. *Handbook of literacy and technology: Transformations in a post-typographic world*, 129-143.
- Natoli, S. J., Boehm, R., Kracht, J. B., Lanegran, D., Monk, J. J., & Morrill, R. W. (1984). Guidelines for geographic education: Elementary and secondary schools. Washington, DC: Association of American Geographers.
- Nicholson-Cole, S. A. (2005). Representing climate change futures: a critique on the use of images for visual communication. *Computers, Environment and Urban Systems* 29(3), 255-273
- Nozawa, K. (2002). Keypal exchange for writing fluency and intercultural understanding. *The changing face of CALL: A Japanese perspective*, 187-201.
- O'Dowd, R. (2003). Understanding the "other side": Intercultural learning in a Spanish-English e-mail exchange. *Language Learning & Technology*, 7(2), 118-144.
- O'Dowd, R. and Ritter, M. (2006). Understanding and working with "failed communication" in telecollaborative exchanges. *CALICO Journal*, 23(3), 623-642.
- Owston, R.D. (1997). The World Wide Web: A technology to enhance-Teaching and learning? *Educational Researcher*, 26, (2), 27-33.
- Patterson, Todd C. (2007). Google Earth as a (Not Just) Geography Education Tool. *Journal of Geography*, Volume 106, (4) 145-152
- Peterson, S., & Kennedy, K. (2006). Sixth grade teachers' written comments on student writing: genre and gender Influences. *Written Communication*, 23, 36- 62.
- Skinner, B.F. (1968). *The Technology of teaching*. New York: Appleton-Century-Crofts.
- Thomas, D. S. K., J. T. Mitchell, M. S. Scott, and S. L. Cutter. (1998). Developing a digital atlas of environmental risks and hazards. *Journal of Geography* 98(5):201-207.
- Von Glasersfeld, E. (1995). *Radical constructivism: A way of knowing and learning*. Washington, DC: Falmer.
- Van Lier, L. (2000). *From input to affordance: Social-interactive learning from an ecological perspective*. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 245-260). Oxford, UK: Oxford University Press.

- Vygotsky, L.S. (1986). *Thought and language* (A. Kozalin, Trans.). Cambridge, MA: The MIT Press.
- Vygotsky, L.S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.
- Wiesenberg, F.(1999). Teaching On-Line: One instructor’s evolving theory of practice. *Adult Basic Education: 9(3)* 1-10
- Warschauer, M., Turbee, L., & Roberts, B. (1996). Computer learning networks and student empowerment. *System, 24(1)*, 1-14.

**Appendixes should be the last section.**

Appendix A

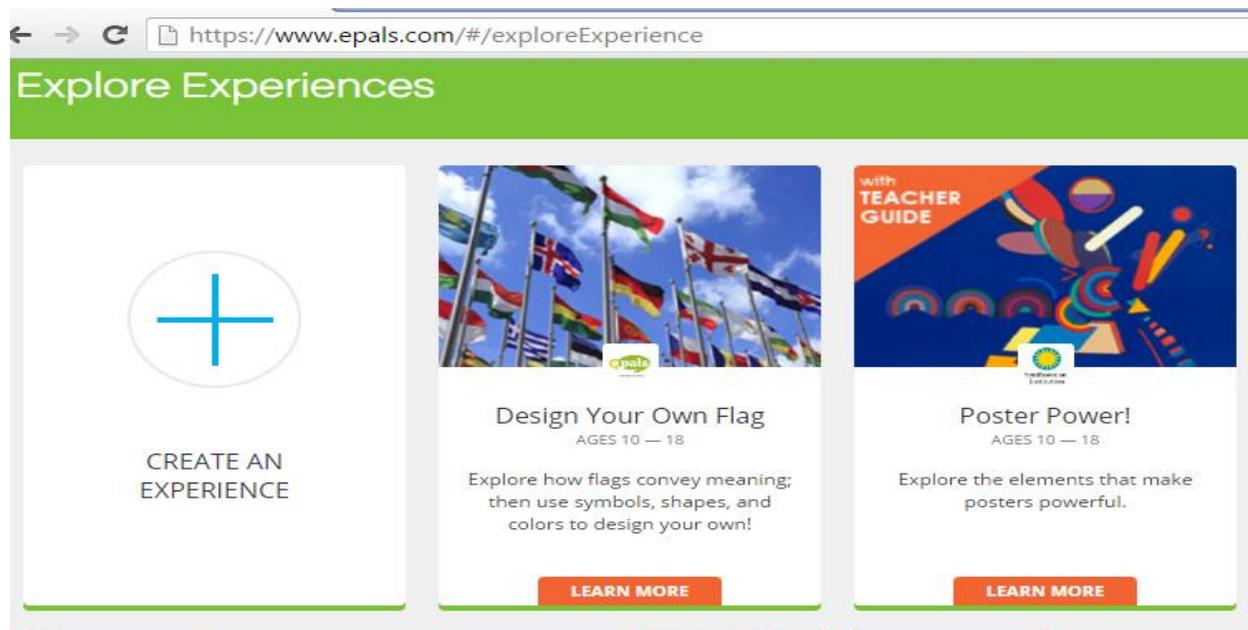
**A Rubric for Evaluating Student Google Earth Findings**

Adapted from “Google Earth Evaluation Rubric ” by Dr. Cynthia Annett  
<https://sites.google.com/site/cynthiaannett/kacee-pre-conference-workshop#TOC-Evaluation-Rubrics>

***A Rubric for Evaluating Student ePals Projects***

Adapted from “ePals Email Rubric: Reading, Writing, and? Thinking about Topics with an ePal” by ePals Global Community  
[http://www.epals.com/projects/info.aspx?DivID=Email\\_Rubric](http://www.epals.com/projects/info.aspx?DivID=Email_Rubric)

**Appendix II: Figures**



**Figure 1**

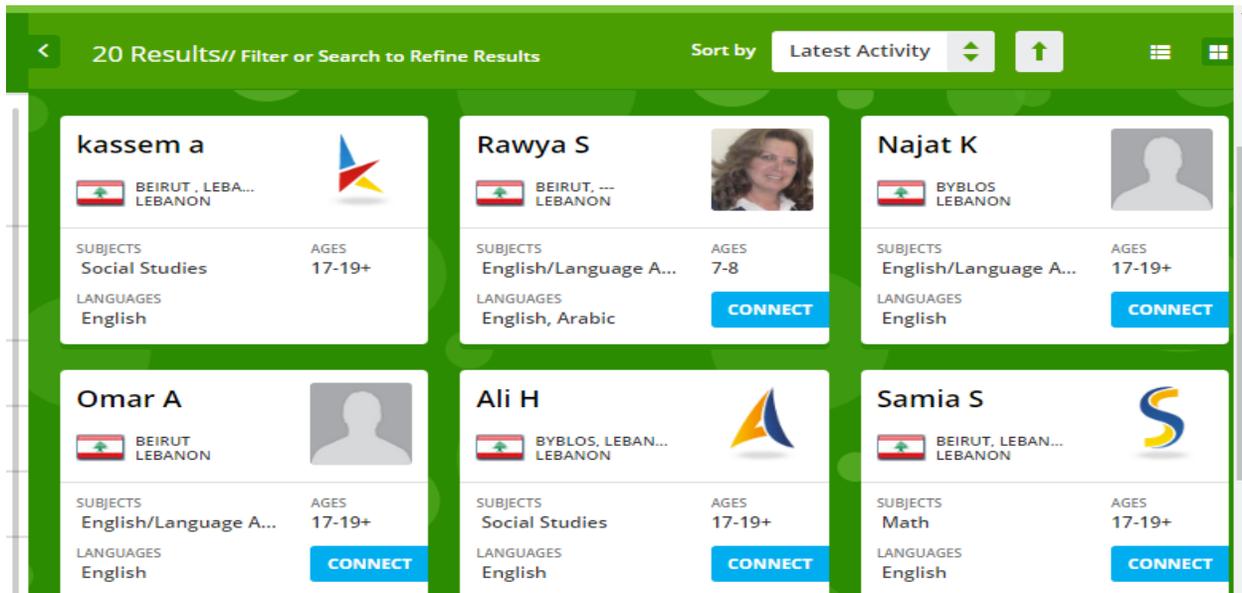


Figure 2