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# *International Journal of* **Instructional Technology & Distance Learning**

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## Editorial

# Winning-over the faculty

Donald G. Perrin

In 1997, enrollment in California universities and colleges was outpacing the ability to build brick and mortar institutions to house them. After a detailed study involving faculty and administrators, distance learning was adopted provide additional capacity. It had many advantages:

1. **Hybrid option:** Distance learning can be a hybrid course with minimal face-to-face interaction, or be totally online, on television, or interactive multi-media.
2. **Scalability:** classroom capacity is not a constraint. Distance learning can immediately serve students that cannot be accommodated in impacted classrooms.
3. **Compatibility:** It can be managed within existing campus operations for student enrollment, faculty hiring, instructional delivery, and evaluation.
4. **Reduced overhead cost:** Cost savings can be used for instructional support including, technologies, tutors, training and support for distance learning teachers.
5. **Management:** Computer-based Learning Management System (LMS) provide 24X7 support for registration, enrollment, delivery of instructional materials, interaction, evaluation, prescriptive-diagnostic support, and a warning system for live intervention where needed.
6. **Quality:** Research had determined that, for the most part, distance learning is at least as effective as live classroom instruction. As a result, administrators and faculty are willing to introduce distance learning classes to expand their offering of courses.
7. **Improvement of classroom learning:** Many faculty adopt distance learning technologies to improve the quality of instruction for on-campus students.
8. **Student Benefits:** Students can learn anywhere anytime 24x7. They can fit distance learning courses into their academic, work, and family schedules; reduce travel time and cost; and manage their own learning.
9. **Faculty Load:** Distance learning instructors spend more time in preparation and communicating with individual students. They enjoy flexible times as do students in 8. above.
10. **Distance learning is an alternative, not a substitute, for live classroom teaching.** Most teachers and students prefer face-to-face teaching and learning. However, distance learning enables access for millions of students who would otherwise be excluded because of distance, cost, schedules, work and family responsibilities, health problems, and/ or disability. It reduces time to graduation by offering alternative courses at times that fit student schedules.

Tremendous effort to improve and optimize distance learning is evidenced by over 500 articles published in this journal and tens of thousands of articles in other journals, books, reports, theses, dissertations, and the Internet. In today's colleges and universities, the quality of distance learning courses is controlled by the same faculty that teach on-campus courses. Some campuses share courses or contract for courses from other universities to extend the range of courses offered. In this way, even a small college with limited budgets can offer a comprehensive curriculum.

By building a technology infrastructure and support systems, and by upgrading faculty skills in the use of these technologies, educational institutions are more resilient to economic crises and budget cuts. In March 2013, the Governor of the State of California recommended distance learning to support students displaced by severe budget cuts. Will he win the support of students and faculty?

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**Editor's Note:** This study studies language patterns in FaceBook as a way to explore actual vocabulary and communication practices used in French conversation. Learner activities focus on specific aspects of language in FaceBook postings that provide a fascinating addition and contrast, to textbook learning.

## **A sociolinguistic study of practices in different social forums in an intermediate French class**

**Geraldine Blattner and Lara Lomicka<sup>1</sup>**

**USA**

### **Abstract**

Technology-enhanced language teaching and learning have dramatically affected the pedagogical practices of language classrooms (Chun, 2007; Felix, 2005; Thorne & Payne, 2005). As Thorne and Payne (2005) predicted, new technologies are increasingly present in academia and educators are slowly stepping into the students' world through forums and social networking tools such as Facebook (FB). In light of these recent innovations, this study examines pedagogical practices using a social forum (forum.fr) and a FB group in the context of an intermediate university level French class. Linguistic tasks as well as questionnaires were administered to language learners. Students were asked to identify the types of salutations, question formation, and colloquial vocabulary, for example, abbreviations or syllabograms<sup>2</sup> (Pierozak, 2003) that were used in two forums; which were thematically linked to the textbook used in the class. Pre and post questionnaires were distributed to participants in an attempt to better understand their perceptions and feelings about the integration of forums in their learning. The main objective of the linguistic task was to demonstrate the extent to which linguistic variation is determined by the communicative context in which language is used, allowing students to develop their awareness of important socio-pragmatic variations by transcending national and cultural boundaries. Although two different social spaces were used (Forum.fr and FB), the tool did not have an effect on the completion of the linguistic tasks assigned to the participants. However, as previously observed by Hanna and deNooy (2003), such access to authentic input in the L2 provide invaluable opportunities for learners to observe and implicitly understand native speakers' linguistic norms in roles other than student, discussing random topics of personal interest to the learners. The moderate integration of this electronic medium highlighted how easily it can enhance a foreign language curriculum to promote competent and literate L2 speakers.

**Keywords:** Facebook, Fora, sociolinguistic practices, intermediate French learners

### **Introduction**

Electronic technologies have become an inherent part of our lives; however, the educational community continues to debate the role they should play in effective teaching and learning (Roblyer, McDaniel, Webb, Herman, & Witty, 2010). In fact, educators tend to resist the adoption of new technologies (Mi-Ryang, 2008; Seels & Talsma, 2003; Strudler & Grove, 2002) which contrasts dramatically with the students' willingness to integrate new electronic tools to their academic life as reported in a national survey conducted in the US by Kleiner, Thomas, and Lewis (2007). In past decades, researchers have relentlessly argued that a variety of computer mediated communication (CMC) tools can promote literacy in general academic settings and more specifically in foreign language contexts (Belz & Kinginger, 2002, 2003; Hanna & deNooy,

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<sup>1</sup> Both authors contributed equally to this paper.

<sup>2</sup> According to the freedictionary.com, a syllabogram is a written symbol representing a single syllable.

2003 ; Lord, 2008; O'Bryan & Hegelheimer, 2007; Thorne, 2003 among others). Research (for example, Lamy & Hampel, 2007) has showed that technology affects language learning in different ways, which is the reason why one pedagogical aim for language instructors is to explore the relationship between language, culture, contexts and technological mediating tools (Kern, 2006).

As Thorne and Payne (2005) predicted, the growing popularity of SNSs (such as FB) within the higher education communities has also affected language classes. In other words, many language educators are interested in using SNSs; however the popular belief that students' privacy will be invaded has been used to interfere with the integration of FB in higher education classrooms (Sickler, 2007). However, two recent studies (Mazer et al., 2007; Roblyer et al., 2010) specifically investigated how college students felt about faculty use of FB and showed that this assumption of privacy invasion is purely speculative and unfounded. Illustrating that self-disclosure of faculty may in fact be beneficial rather than hindering learning experiences, a small scale-survey (Mazer et al., 2007) reported that students, whose instructors self-disclose on FB, developed higher levels of learning and motivation than their counterparts. Furthermore, Roblyer et al. (2010) found that only 15% of participants felt that their privacy was infringed on in classes where faculty encouraged the use of FB. These two empirical studies illustrate that the privacy infringement's argument commonly used by faculty as a reason not to use SNSs in the classroom appears to simply constitute an excuse not to integrate interesting, public and free electronic resources in the curriculum. This idea is supported by Moran, Seaman and Tinti-kane (2011), who discovered in a survey that out of the 77% of faculty teaching US higher education who reported using FB for personal reasons, only 4% reported use of the same website in the context of the courses they teach. These results suggest that while students appear to be comfortable with the potential application of SNSs in educational setting, faculty are not yet ready to engage with these tools pedagogically.

Despite the resisting trend to incorporate FB in courses, recent pedagogical investigations have attempted to identify whether such Web 2.0 sites can provide L2 learners with new opportunities to develop their linguistic abilities. Roth (2009) claims that: "in our time the teaching and learning should be interactive personalized and holistic" in order to "move away from the passive realm of reading and into the interactive world of digital pedagogy" (p. 127). SNSs can help learners to embrace cyber learning and acquire practical online skills (Northcote & Kendle, 2001). There is only limited research that has investigated the pedagogical and technical usability of an SNS site such as FB in the context of foreign language learning; however, in basic communication courses at a large Midwestern university, Mazer et al. (2007) found that the use of such an online SNS impacts university classes in terms of motivation, affective learning and classroom climate. More recently, Junco (2011a) investigated the correlation of students' FB usage and the time they spend preparing for class and in co-curricular activities. Based on a survey (N=2368), the results showed that FB use is not detrimental to academic outcomes and can indeed be used in ways that are advantageous to students. Junco points out that faculty should familiarize themselves with SNSs such as FB in order to judiciously integrate them in their classes in ways that are beneficial to their students' engagement (i.e., participation in campus organization), retention and overall academic experience. In another study in which 1839 college students took part, Junco (2011c) points out that the time spent on FB is a strong negative predictor of overall college GPA (Grade Point Average<sup>3</sup>). In other words, large amounts of time spent on FB appear to detract students from time focusing on academic work. The results of this

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<sup>3</sup> The grade point average (GPA) is the term used in the U.S for *average grades*. It is calculated by dividing the total amount of grade points earned by the total amount of credit hours attempted. Your grade point average may range from 0.0 to a 4.0. (<http://www.back2college.com/gpa.htm>)



recent investigation serve as an excellent source of motivation to explore how can FB be used as a resource in a foreign language curriculum (and other courses). These findings can also guide educators in helping students to utilize SNSs as a learning tool that functions as an extension of their language classrooms instead of limiting its usage to a socializing experience.

To further the growing body of research in this area, we propose in this chapter to explore how educators can utilize FB to specifically enhance the development of L2 learning, especially aspects that are not typically promoted in course materials for basic levels of foreign language instruction, such as socio-pragmatic competence<sup>4</sup> (Bardovi-Harlig, 2001; Hassal, 2008; Uso-Juan, 2007; Vellenga, 2004; among others) and the development multiliteracy skills (Chun, 2007; Gonglewski & DuBravac, 2006; Kern, 2000; among others).

## Facebook in the language classroom

Given the fact that FB has become the most popular social networking site among university students (Buffardi & Campbell, 2008; Hargittai, 2008; Jones & Fox, 2009; Kabilan, Ahmad, & Abidin, 2010; Stutzman, 2006; Tufekci, 2008) it is not surprising to see that in the past few years several investigations have explored how this SNS can be used to support classroom work in general (Roybler et al. 2010) and also more specifically how language educators can utilize FB in L2 classes in pedagogically meaningful ways (Blattner & Fiori, 2009; Blattner, 2011; Blattner & Fiori, 2011; Blattner & Lomicka, 2012; McBride, 2009; Mills, 2011; Kabilan et al., 2010; Stevenson & Liu, 2010).

Blattner and Fiori (2009) explained how FB could be used in L2 education classes to complement language textbooks. They focus on how exploiting this online resource could improve the socio-pragmatic competence of learners and develop a sense of community in language classrooms; the authors also provide a powerful and authentic representation of how languages are embedded in a social context. In addition, they suggested that FB opens doors for students to be involved in their own learning process by engaging with other learners and native speakers, transcending the spatial and temporal confinement of traditional language classes. Finally, they claimed that using FB may positively transform the limited in-class interaction and the learning experience as a whole. McBride (2009) similarly pointed out that FB was “built to allow people to express themselves and to interact socially with others” (p.35), which is a context language educators aspire to construct in their classroom to promote language acquisition. Blattner and Fiori (2009) further elaborate that it would be beneficial for faculty to recognize the importance of integrating such SNSs in the higher education curriculum since, as suggested by Farris-Berg (2005) and Prensky (2001; 2006), such Web 2.0 tools meet the connectivity demands that today’s Digital Natives<sup>5</sup> expect.

Mills (2009) investigated how to make FB a valuable learning environment to engage French learners into communicating *in lingua*. In her global simulation project, students had to create a fictive yet culturally grounded world and collaborate with classmates to accomplish various goals set by the instructors. Mills noted that the students who took part in this project developed a sense of community with other class members which resulted in positive and dynamic engagement between learners. Similarly, Blattner and Fiori (2011) conducted a semester-long study to investigate whether FB could be exploited to develop socio-pragmatic awareness and enhance

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<sup>4</sup> This concept is defined by Leech (1983) as considering both the context and the social variables and how they affect pragmalinguistic choices.

<sup>5</sup> Although there is debate about the reality of this term, we adopt Wikipedia.com’s definition: “person who was born during or after the general introduction of digital technologias and through interacting with digital technology from an early age, has a greater understanding of its concepts”

multiliteracy skills in Spanish classes. In their study, language learners conducted a linguistic analysis of various speech acts (i.e.: greetings, leave-takings) and lexical items (i.e.: abbreviations, syllabograms) on FB *groups* that were thematically based on topics covered in the textbook. The results suggested that such an observation-based task was useful and enhanced the socio-pragmatic knowledge of the Spanish learners. In addition, the participants were able to assess functional and cultural appropriateness of a variety of speech acts the target language which added to the benefits of FB creating favorable conditions for them to interact with target language speakers.

A few researchers have looked at how learners view the usage of FB as a component or a tool promoting the acquisition of a foreign language. For instance, Kabilan et al. (2010) carried a quantitative survey with 300 undergraduate Malaysian students exploring general practices of FB and whether they considered FB to be a useful and meaningful tool to support, enhance and strengthen their English learning experience. The data collected suggested the participants in this study acquired new words, built confidence and developed their motivation and positive attitude towards learning English. Recently, Blattner and Lomicka (2012) conducted a survey-based project in an intermediate French class to investigate to students' views on the integration of FB in a higher education language course. Participant views, specifically their willingness to develop their electronic literacy in a L2 and to recognize and use multiple discourses and media as well as investigate, interpret and comprehend their content, were examined (see also Kern, 2000). According to Blattner and Lomicka (2012), students' overall response to using this SNS was positive; however, they noted that the students who participated in this study had not previously used FB for educational purposes. Thus the authors highlighted the importance of guiding students to use this type of online resource toward educational endeavors; structured guidance could provide additional practice of interpretative and interpersonal modes of communication.

## The study

Relatively few studies have been published which document the pedagogical benefits (social and linguistic) of integrating FB in the classroom. Consequently, one of the goals of this chapter is to further elaborate the potential of SNSs in language classes to provide educators with tangible and pedagogically sound activities that could easily be integrated in language classes.

To that end, this study investigates the pedagogical practices using electronic forums and the *group* application of the social networking community FB in the context of an intermediate French course (4<sup>th</sup> semester). Many French textbooks present limited information about major socio-pragmatic elements or basic cultural facts such as how the French greet each other in different regions; this information can vary dramatically depending on their context of occurrence; they also evolve with time. Therefore, this important aspect of communicative competence can be better understood by observing usage in context. Given the prolific use of electronic media in the way we communicate, it appears essential to provide language learners with the opportunity to observe L2 usage in context. We look specifically at the development of socio-pragmatic awareness as students work through two tasks using social environments.

While visiting two different thematic groups – one in FB and one on forum.fr, students were asked to identify the types of greetings, leave-takings and colloquial vocabulary (i.e. abbreviations, syllabograms) that were used in various communities; these forums were thematically linked to the textbook required for the class. Data are pulled from two sources. First, two tasks were incorporated into students' work during an academic semester. These tasks are examined from a socio-pragmatic perspective – students were instructed to read more about the use and context of abbreviations, syllabograms, salutations, and types of questions. Second, pre and post questionnaires were distributed to the participants in an attempt to better understand their perceptions and feelings about the integration of this SNC in their language classroom and how

beneficial this additional component can be in their language learning journey. Data from both sources are analyzed to offer a more complete picture as to the use of electronic groups and forums in L2 learning. Through the notion of legitimate peripheral participation (Lave and Wenger, 1991), researchers interpret data in the forum in action as observation is essential to understanding the practices of a community. Our research questions follow.

## Methodology

### Research questions

Our study seeks analyze the L2 socio-pragmatic awareness that students gained using a FB group and a forum task and to gauge students' perceptions of their experience. Specifically, we seek to investigate the following questions:

1. What were students' thoughts about the integration of FB in their intermediate French class?
2. What types of sociopragmatic patterns were noticed by students in social groups, such as the type and frequency of abbreviations and syllabograms, salutations, and question formation?

## Participants

The participants in this study included 19 to 21 students who were enrolled in an intermediate level French course at a large southeastern university in the US during the fall 2011 semester; at this level, most students are able to read through and understand a range of written texts, such as the ones used for this study. For the tasks (outlined in the next section), a total of 19 students participated. The pre-survey was administered to 21 students and the post-survey to 19 students. Numbers varied due to absences on particular days that tasks or surveys were administered. Students, who ranged in age from 18-21, were made aware that this project was part of their course requirements.

## Tasks and procedures

### Tasks

Two sociolinguistic tasks were administered to intermediate French language learners. Students were asked to identify the types of salutations and colloquial vocabulary (i.e. abbreviations, syllabograms) as well as occurrences of question words; these group and forum were thematically linked to the textbook used in the class. The tasks are outlined as follows:

The first task asked students to explore the group *J'aime le foot*<sup>6</sup>. Students spent time in the *group*, and especially in the comments sections as they noted abbreviations, syllabograms, and noted the frequency of *tu* and *vous* pronouns.

The second group that students explored was *Loisir et Passion*<sup>7</sup> in the Antilles. Students spent time exploring the *group* and noted five salutations and 5 questions, as well as noted the frequency of *tu* and *vous* pronouns.

Two different environments were used (a FB group and a forum at forum.fr); each was chosen because it provided access to a rich social community that corresponded to thematic topics covered in class. Essentially, these environments function in very similar ways – they both offer a community with which to observe interactions. For the first two tasks, students were provided

<sup>6</sup> This Facebook group no longer exists. It has changed to an app.

<sup>7</sup> This forum can be found at: <http://www.forumfr.com/sujet425518-quelle-est-la-plus-belle-ile-des-antilles.html>

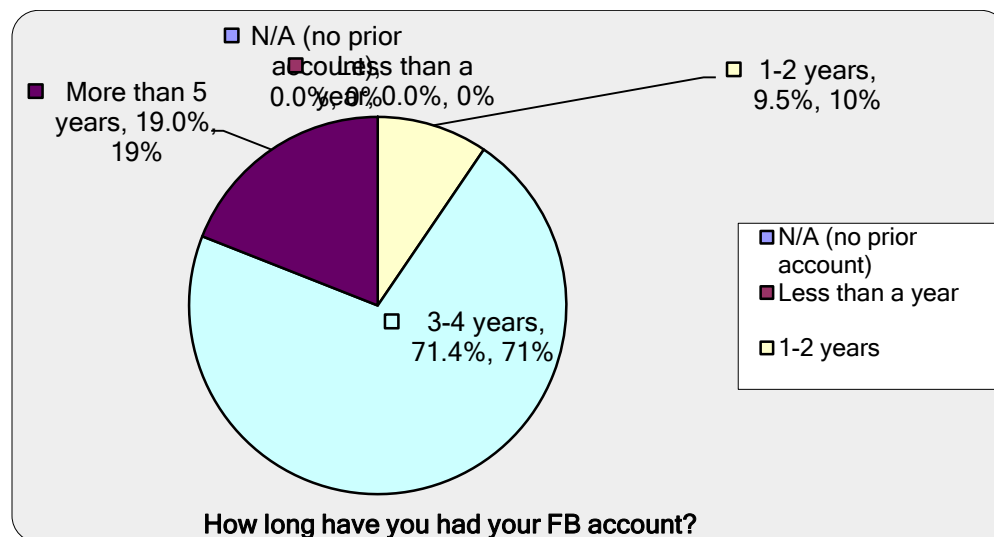
with a worksheet to guide their identifications and observations in the forums. Each sociolinguistic task was followed by an in class discussion time that was digitally recorded and stored.

### Surveys

Two surveys -- Pre (N=21) and post (N=19) -- were administered through surveymonkey.com to students at the beginning of the semester and then again at the end of the semester. These surveys were distributed to the participants in an attempt to better understand their perceptions and feelings about the integration of FB in an intermediate language class and an academic setting, and to assess the benefits or drawbacks of using FB in the L2. The pre-and post-surveys asked the participants questions about their experience with FB prior to engaging in the project as well as at the end of their project, their reactions, and other general questions regarding the usefulness of the project in the specific context. The survey was designed by the researchers of this project. For each survey, the responses were tallied to search for trends similarly to Junco (2011a; 2011b; 2011c). The surveys can be found in Appendix A and Appendix B.

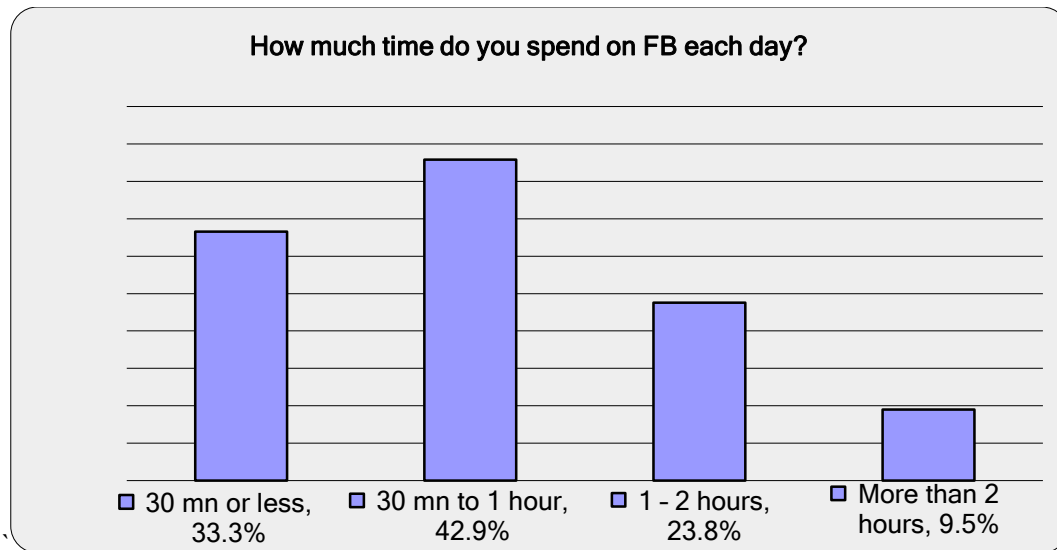
### Procedures

The teacher led students through a brief training session during class to acquaint students with the class FB *group* and the forum.fr and how FB would be used over the semester. The teacher also addressed issues related to student privacy (Stutzman, 2006; Tufekci, 2008) as many FB users remain oblivious to online privacy or the information they divulge. The professor told students that they would participate in specific tasks that would allow them to visit French speakers social groups during the academic year.



**Figure 1: Duration of FB account**

In the pre-survey, students reported that they typically spend between 30 minutes to 1 hour using FB each day (see Figure 2) and 16 out of 21 (76%) students spend 1 hour or less on FB each day. In the post-survey, results show that 16 out of 19 (84%) used FB for 2 hours or less per day while 3 out of 19 students reported that they use FB for more than 2 hours per day. This number reported is less than the average time reported by Junco (2011a) who drew data from a survey of 2400 students who indicated they spent an average of 102 minutes per day on FB.



**Figure 2: Time spent on FB/day**

Students were asked in both pre- and post-surveys about their uses of FB in both personal settings and in education. Results suggest that while the use of FB for personal reasons is prolific, the majority (N=16 of 19 or 84%) of students had not used FB previously in an academic course (see also Blattner & Lomicka, 2012). The lack of experience using FB in the academic setting may explain why students' educational perceptions of how FB could be used were rather limited in scope.

Tables 1-4 draw attention to the results of both personal and education use. There are some striking differences in how students use FB personally as opposed to how they use it academically.

<b>Table 1</b>		
<b>Pre-Survey: How do you FB for personal use?</b>		
<b>Reasons</b>	<b>Response Percent</b>	<b>Response Count</b>
To send email	42.9%	9
Picture viewing and posting pictures	95.2%	20
Posting personal messages to your wall	95.2%	20
Posting personal messages to others' walls	95.2%	20
Posting/sharing links	95.2%	20
Checking friends information and activities	90.5%	19
Participating in chats	61.9%	13
Belonging to groups	76.2%	16
Other	19.0%	4
N/A (have not before)	0.0%	0

**Table 2**  
**Pre-Survey: How do you FB for educational use?**

Reasons	Response Percent	Response Count
To send email	19.0%	4
Picture viewing and posting pictures	38.1%	8
Posting messages to your wall	9.5%	2
Posting messages to others' walls	42.9%	9
Posting/sharing links	52.4%	11
Posting/sharing videos	61.9%	13
Looking at FB groups	66.7%	14
Checking friends information and activities	28.6%	6
Checking teacher's information and activities	33.3%	7
Participating in chats	47.6%	10
Belonging to groups	76.2%	16
Other	4.8%	1
N/A (have not before)	4.8%	1

**Table 3**  
**Post-Survey: How do you FB for personal use?**

Reasons	Response Percent	Response Count
To send email	42.1%	8
Picture viewing and posting pictures	94.7%	18
Posting personal messages to your wall	89.5%	17
Posting personal messages to others' walls	100.0%	19
Posting/sharing links	100.0%	19
Checking friends information and activities	94.7%	18
Participating in chats	63.2%	12
Belonging to groups	73.7%	14
Other	10.5%	2
N/A (have not before)	0.0%	0

For personal use, students primarily use functions such as viewing and posting video, posting to others' walls, checking friends' information and activities, and sharing links. These results are consistent with findings from Blattner and Lomicka (2012). Educational uses, as reported by students, were quite different. For academic purposes, students commented that they participated primarily in posting and sharing videos and in looking at and belonging to FB *groups*.

**Table 4**  
**Post-survey: How do you FB for educational use?**

Reasons	Response Percent	Response Count
To send email	26.3%	5
Picture viewing and posting pictures	15.8%	3
Posting messages to your wall	5.3%	1
Posting messages to others' walls	47.4%	9
Posting/sharing links	63.2%	12
Posting/sharing videos	68.4%	13
Looking at FB groups	73.7%	14
Checking friends information and activities	5.3%	1
Checking teacher's information and activities	15.8%	3
Participating in chats	47.4%	9
Belonging to groups	78.9%	15
Other	0.0%	0
N/A (have not before)	5.3%	1

Students were also asked to comment on their electronic literacy skills and in fact, while all students considered themselves multiliterate<sup>8</sup> in English, in the pre-survey only about half of the students (N=10/21 or 48%) considered themselves multiliterate in French. Results shifted slightly in the post-survey (N=13/19 or 68%), suggesting that the participants felt more at ease after having utilized the SNS FB in the context of the class. This result highlights the potential of conducting a linguistic observation task in electronic media in the context of foreign language classes. Although this is not a new finding, it should be noted that students became aware of certain linguistic norms such as the presence of a particular abbreviation in a specific electronic context by completing this task. After having presented some general information on students' experiences with FB, we now look more closely at specific FB tasks.

### ***Linguistic analysis***

In order to conduct the linguistic analysis, students submitted written responses to each of the two linguistic tasks. In their responses they noted the type of salutations, any abbreviations and syllabograms, and the type of question used. Written tasks were assessed for completion and then discussed further during a 30 minute class period, which was digitally recorded as a verbal report and stored (Gass & Mackey, 2000; Hassall, 2008). Hassall (2008) speaks to the importance of verbal reports in examining the observations of language learners as they process knowledge of socio-pragmatic norms and the development of multiliteracy skills. Further, Cohan (1996) acknowledges that the use of verbal reports as a source of data is on the rise. The sections below categorize the written tasks (abbreviations and syllabograms and salutations and types of questions), displaying frequency of each, as noted by the participants in both written form and verbal reports.

<sup>8</sup> Gonglewski and Dubravac (2006) explain that "multiliteracy is characterized by an ability to communicate in a multimedia environment with all the additional complex factors and functionalities that such a diverse cross-cultural and highly social context brings to bear "(p.45).

### Abbreviations and syllabograms (Task 1)

The first task asked students to explore the FB group *J'aime le foot* (I like soccer). Students spent time in the group, and read carefully the comments sections as they kept track of orthographic variations focusing on the use of abbreviations and syllabograms. van Compernelle and Pierozak (2009) explain in detail six typical types of intentional orthographic variations observed in electronic language; however, we decided to omit observation of accent suppletion<sup>9</sup> as it is difficult to establish if it is truly intentional. Instead, we used the overarching term abbreviation (which includes vowel deletion like in the word *tjrs* – *toujours*, acronyms such as *tlm* – *tout le monde*, truncation *bon app* – *bon appetit*, oralization like *y' a* – *Il y a* and syllabogram *c* – *c'est* or *sait* for all the other categories identified by van Compernelle and Pirozak (p. 114). The same authors point out that simple memorization of a-contextual orthographic forms is not beneficial for learners<sup>10</sup>. Instead, they insist that it is essential for forum participants to first identify what types of orthographic variation exist and what the possible interpretations of these variations are based on the context of occurrence. This can only be accomplished by incorporating activities that help learners contextualize language use in an L2 in order to develop their awareness of how language variation functions in authentic electronically based interactions.

The total number of abbreviations found in the forum *J'aime le foot* was 38. Twenty-nine syllabograms were noted by participants. Table 5 displays each instance, as well as the number of times it was located by participants. The most prominent syllabogram was “C” [*c'est* = it's] (20 observations); however, as suggested by van Compernelle and Pierozak, this particular non-standard orthographic form is polysemous. Decontextualized “C” can also refer to the verb forms *sais/sait*, the reflexive *s'est* as these are phonetically represented as /se/. The most frequently observed abbreviations were the acronyms “*mdr*” [*mort de rire* – equivalent of laughing out loud] (20 observations) and “*ptdr*” [*pété de rire* – another equivalent for laughing out loud] (11 observations).

The activity based on *J'aime le foot* was clearly the task that was preferred by students. One student indicated that she “learned a lot from reading the ‘J'aime le foot’ FB page and the forum on voyage and hobbies. [She] was able to see how French people actually talk to one another and how they do not always use proper French, which is a common idea that students infer when they are only exposed to ‘standard’ French from textbooks. In the past French classes, [she] only learned the formal way to speak and write French, but these forums proved to [her] that French, just like the English language, has many abbreviations and phrases. [She] learned many things like *tjr* is the abbreviation for *toujours*, *mdr* is the abbreviation for *mort de rire*, and *C* is a short form for *c'est*.” Typically, students who spend time abroad are suddenly confronted with a large gap between the standard variation that they learned in traditional classroom environment and the more colloquial use of the language that is typical of native speakers (Kingerer, Blattner & Roulon, 2009).

<sup>9</sup> In French there are 4 different accents: the acute (é), grave (à, è, ù), and circumflex (â, ê, î, ô, û) accents and the diaeresis or trema (ë, ï, ü). Accent deletion simply refers to the omission of these diacritics where one would be expected in traditional writing.

<sup>10</sup> In the sentence: “*je c pas qui c*” the first *c* can only be read as the verb form *sais* while the second *c* must be interpreted as *c'est*.



**Table 5**  
**Type and number of abbreviations and syllabograms**

	abréviation ou syllabogramme ?	Number of times noticed
Mdr = mort de rire	A	20
C = c'est	S	20
Mai = mais	S/A	2
fo = faut	S	3
B1	S	4
O = au	A/S	2
Wai = oui	S	2
Pa = pas	S	1
Kil = qu'il	S	2
Fai	A	1
Ke = que	S	3
Kom = comme	S	1
T = t'es	S	5
SVP	A	5
Js = je suis	A	4
Kan	S	3
D'acc	A	4
PTDR	A	11
G = j'ai	S	4
D'ab = d'abord	S	1
Tjs = toujours	S	3
Jms = jamais	A	3
M = merci	A	2
Y a	S	2

Another student commented: *“This [assignment] was very interesting to do. We got to go onto a native French Facebook group and read what they were saying. I learned that the French use abbreviations while chatting online just like we do. I had never thought about it. They have their own letters for things like ‘lol’ (ptdr) and they shorten ‘bon’ to bn.”* It has not occurred to some students that other languages use text talk, just as they do in their native language, and that learning the language of text talk can resemble that of a new language. Another student stated that: *“The way the French use the Internet, and use language over the internet is very similar to our own American habits. I had no idea that they had abbreviations separate from our own that mean the exact same thing basically! From this I learned that people use many different languages over FB and that it is very common for language to be abbreviated on popular internet*

forums. I love “mdr” (*mort de rire*) and that “LOL” (*laughing out loud*) means the same thing to us. I think it is interesting how they abbreviate according to pronunciation as well. As in “O” =au. After reading this it got me thinking about how I am pronouncing words then I speak. I really enjoyed this homework assignment.” The language of text talk has gained in popularity due to the fact that it is both immediate and compact.

Students are also cognizant that technology plays a significant role in their learning and recognize cultural similarities in the use of social media: “I really enjoyed this activity because I learned a lot about online communication and abbreviations and syllabograms in French culture. The Internet is the new frontier of language and culture; it is important to be able to communicate and understand others on multiple planes. I found this assignment fun, informative and challenging. There are more similarities between French culture and American culture than I had originally imagined when it comes to youth, social media, forums and blogs. Some of the abbreviations, such as ‘ptdr’ and ‘kan’ were difficult to figure out, but make sense when you do. I found it interesting that the two languages and cultures can evolve the same way to incorporate new modes of communication such as email, forums and blogs. Learning that the French have their own form of LOL and JK made me feel like I had more in common with the French students, and the French youth in general, than I originally thought.” Issues related to technology, culture, and communication emerges as students examine and compare how they view themselves with their views of others.

### **Salutations and questions (Task 2)**

The second forum that students explored was *Loisir et Passion* in the Antilles. Although this site was not linked to FB, it functioned essentially in the same way – as a community of participants who interact around and communicate about a common theme. Students spent time reading posts made by forum members and were instructed to take note of five salutations and five questions.

As they lurked around the forum, students were specifically instructed to observe and note types of salutations that they encountered as they read over recent posts (see Table 6). Most salutations observed were of an informal nature (*coucou* – 16 notations; *salut* – 15 notations) with *bonjour*, which could be used in both formal and informal contexts, ranking highest (34 notations). While *salut* and *bonjour* are common salutations that appear in textbooks, *coucou* does not. Students were exposed to a very informal salutation that they did not encounter before. After spending time in the forum, students concluded that salutations tended to be informal in nature and that they were generally inclusive of the entire group and not directed at individuals. Thus, they recognized that a norm of salutations does exist within an electronic social group. According to Vorvorneau (2009), the culture of online communities brings with it specific norms for social interaction, which makes such forums interesting communities to study.

**Table 6**  
**Types of salutations**

Type	Number
Bienvenue	1
Coucou	16
bonsoir	4
bonjour	34
Salut	15

### Types of questions (Task 2)

In addition to exploring the various types of salutations used, students also were required to note types of questions that they observed. French offers a variety of interrogative constructions to choose from; however, in textbooks some of the interrogatives that are emphasized are only rarely used by native speakers. The problem that has fascinated a number of linguists (Behnstedt 1973; Coveney, 1996) who collected a variety of data from radio recordings and conversations with French native speakers of different socioeconomic, and cultural backgrounds as well as different ages and gender, is that the use of inversion interrogatives was overestimated. Results of these studies indicated that in everyday speech, French speakers most frequently use the *in situ* (intonation) construction that is syntactically less complex than any others.

Similarly to what Behnstedt (1973) and Coveney (1996) found in oral speech, questions using intonation ranked highest in the discussion forum observed, according to what the students noted (37 notations), with *Quel/qui/où* questions ranking second (see Table 7). Not surprisingly *est-ce que* and inversion were also found, but not used nearly as often. Since these types of question formations are more formal and often used in writing, it is not surprising that the type of speech represented in the forum follows the norms of spoken French. The results, when discussed in the verbal report, pointed to the trend noted by one student: “...it showed me that when talking to one another, [...] intonation is the most used for questions.” The student’s comment highlights the potential of making learners aware of the pragmatically appropriate interrogative constructions to use in forums, issue that is not addressed in language textbooks which often focus on more formal variations.

**Table 7**  
**Types and frequency of questions**

Question type	Number
Intonation	37
Est-ce-que	5
Inversion	14
Quel/qui/où	31

### Discussion

We now return to address the research questions in more detail. We begin by looking back at the questionnaire. The first question aims to gain a better understanding of students’ thoughts on the integration of FB in their intermediate level French class. Results of the pre- and post-questionnaires point to a number of trends. First, students are regular users of social networking sites, and particularly FB. As noted by Corvida (2008), Generation Y is a group that is extremely socially conscious and cognizant as to how social changes affect them. Further Generation Y uses the internet as a tool to keep up to date on current happenings (Corvida, 2008). Corvida further explains that “Gen Yers are making their stances well known on Facebook” (2008, para. 2). It is not surprising then, that participants in this study consider the social uses of FB a priority. Second, while participants use FB for social purposes, their experiences with FB in academic settings were not frequent. In the limited cases where FB had been used, students reported using this tool to email other students and to assist with organizing group projects. This finding is consistent with previous research which suggests that teachers are more reluctant to use FB in classes and prefer to stick more to traditional tools (Roblyer, McDaniel, Web, Herman & Witty, 2010), but students prefer the use of FB for social purposes over academic ones (Blattner & Lomicka, 2012; Ellison et al., 2007; Pempek et al., 2009). Finally, students were positive about

the use of FB in French class. They reported that they thought FB could be used in education to build community, practice the language, access native speakers, promote communication in less formal ways, keep students connected outside of class, engage in group projects and learn more about language and culture similarly to other forums not hosted by the SNS FB.

Next, we address the linguistic tasks. The type and frequency of abbreviations and syllabograms were characterized by a prolific use of the *C* (*c'est* – it's) and of *mdr* or *ptdr* which are the equivalent for LOL (and its variations). As reported by Tagliamonte and Denis (2008), LOL “is used by our participants in the flow of conversation as a signal of interlocutor involvement, just as one might say mm-hm in the course of a conversation” (p. 11). They further specify that the use of LOL declines with age and that their research indicates that it is used primarily among younger generations. That said, the high usage of French equivalents of LOL may be consistent with the general trend that they are used to maintain conversational flow; however, they may also be widely employed by readers of younger generations. Regardless of how they are used and who uses them, participants were pleasantly surprised to learn of the equivalents. One student reported that “*It [was] funny to see the French slang terms such as mdr which means mort de rire or dying of laughter*” while another student commented that he enjoyed learning “*about the different types of "webspeak" people in France use.*”

The type and frequency of salutations as well as the type and frequency of question formations that participants noticed all point to an informal trend in language use in social groups and forums. While three forms of salutations were observed most frequently (*bonjour, coucou, salut*), participants become cognizant that the use of *coucou* was one not typically found in textbooks and constituted a new discovery for them. As one student pointed out that, “*[...] all of the abbreviations [were new to me]. Also the greeting "Coucou" (or something similar) was new to me.*”

Participants noticed a general trend that uses intonation in asking questions. This phenomenon also implies an informal use of written language in electronic contexts that students became aware of during their task. An interesting element that is naturally highlighted during the discussion of these linguistic tasks is a linguistic-based conversation about language use in electronic media in comparison to the material presented in language textbook. This is an undeniably eye-opening experience for the students who start reflecting and critically analyze the vocabulary that has been presented to them throughout textbook chapters and the language that they saw being used by native speakers. One student expressed that the linguistic tasks were “*certainly more valuable than looking at a text book and learning only formal methods of communication.*” Noticing socio-pragmatic features represents an important step in the development of communicative competence in a L2 learner and also at understanding how to complete their knowledge with linguistic components that textbooks omit to discuss. As one student put it, it is important to be “*[...] able to know when something is appropriate and how to address, talk to, and socialize across different types of media.*” Another student added that “*These activities were different than the usual class room activities. We were able to explore other aspects of French culture instead of just learning things located in a textbook.*”

Overall, the results suggest that analyzing the language used by members of forums and social groups can indeed enhance the awareness of important socio-pragmatic elements by transcending national and cultural boundaries (see also Blattner & Fiori, 2011). As previously observed by Hanna and deNooy (2003), such access to authentic input in the L2 provide invaluable opportunities for learners to observe and implicitly understand native speakers' linguistic norms in roles other than student, discussing random topics of personal interest to the learners. The consistent integration of this electronic medium highlighted how easily it can enhance a foreign language curriculum to promote competence and literacy in L2 speakers. Students also responded positively to the linguistic tasks. 74% (14/19) students indicated that after having completed this

project, they would be inclined to visit FB groups and forums on their own for personal enrichment and language practice. One participant explained that the tasks “[...] helped me to learn French abbreviations and idioms that I would not have otherwise learned” while another noted that “It was interesting and beneficial to learn about the informal talk of the French.”

## Conclusion

Students certainly enjoyed the exploration of electronic forums in an academic setting and did not seem to prefer one over another, despite the fact that these forums are linked to different electronic tools. Students reported that the use of forums enhanced their learning experience, which had been traditionally associated with textbooks. While textbooks are important for language learning, so are other types of discourse and vocabulary. Textbooks and online tools are complementary and can harmoniously co-exist to provide students with opportunities to understand a wide range of linguistic, social and structural dimensions of electronic media. As Valdman (2003) pointed out: “The recognition that all forms of speech are worthy and that there are no “primitive languages” or “corrupted dialects” unsuited for the potential uses to which a given community may wish to put them, should be an important outcome of L2 instruction” (p. 76). In order for learners to make gains in proficiency, language educators must include less formal variations of lexical and grammatical information, so that they can learn how to appropriately select the most relevant forms to use depending on the situational context. Currently, learners are likely to produce more deviant forms from a socio-pragmatic perspective, as they are typically not exposed to activities which would make them aware language variation. The inclusion of activities as the one presented in this chapter can only be beneficial to language learners who will dynamically develop an understanding of the full range of L2 variants that exist in the native speakers’ world. Electronic forums (whether on SNSs or on the Web) offer access to a wider variety of interlocutors than can textbooks. Abraham and Williams (2009) noted that observing language on various computer mediated communication tools is much more efficient than even traveling to a country where the L2 is spoken, even though they do not deny the benefit of such an experience.

Although participants responded positively to this study; however, we need to point out that while both social environments function as electronic forums in a particular community, future research could examine multiple forums within a same community and examine how students engage in social networking to extend their engagement with the tasks, and if this assists them with this sociopragmatic development. Research could also investigate student interactions within these same forums, after observing discourse for a period of time. In light of limitations, the participants were highly praising of the tasks and of their experiences with FB and were eager to use them again in other language classes. As one student put it, “It is helpful to learn how French people actually talk (instead of the formal ways of saying things) because when you visit the country/talk to someone from France, you can sound more personal and fit in better.”

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## Appendix A

Note: This pretest is reformatted from the original to conserve space

1.	<i>What are the first four numbers of your student ID?</i>	
2	<i>What is your gender?</i>	
3	<i>What is your age?</i>	
4	<i>What is your major?</i>	
5	<i>What is your first language?</i>	
6	<i>What other languages do you know?</i>	
7	<i>Prior to this project, did you have an FB account?</i>	a. Yes b. No
8	<i>If Yes, with what frequency do you FB?</i>	
9	<i>If Yes, for what purposes did you FB? (i.e. personal, class, etc.)</i>	
10	<i>How long have you had your FB account?</i>	a. N/A (no prior account) b. Less than a year c. 1-2 years d. 3-4 years e. More than 5 years
11	<i>How much time do you spend on FB each day?</i>	a. 30 minutes or less b. 30 min to 1 hour c. 1-2 hours d. More than 2 hours
12	<i>How do you FB for personal use? (check all that apply)</i>	a. To send mail b. Picture viewing and posting pictures c. Posting personal messages to your wall d. Posting personal messages to other's walls e. Posting/sharing links f. Checking friends information and activities g. Participating in chats h. Belonging to groups i. Other j. N/A (have not before)
13	<i>How do you FB for educational use? (Check all that apply)</i>	a. To send mail b. Picture viewing and posting pictures c. Posting personal messages to your wall d. Posting personal messages to other's walls e. Posting/sharing links f. Checking friends information and activities g. Participating in chats h. Belonging to groups i. Other j. N/A (have not before)
14	<i>Approximately how often do you check FB to see what others have posted?</i>	a. Never, except when I was posting my own messages b. Once or twice a week c. About 3 times a week d. Daily e. Several times a week (i.e. more than once a day)
15	<i>Are you "friends" on FB with other students in this class or from France?</i>	a. Yes b. No

16	<i>Do you anticipate you will use FB to talk to:</i>	<i>a. Classmates in the U.S, enrolled in this course</i> <i>b. French partners</i> <i>c. Your professor</i> <i>d. Both</i> <i>e. Neither</i>
17	<i>Do you anticipate that your FB communication with classmates in the U.S. and in France will include: (Check all that apply)</i>	<i>a. The common discussion board</i> <i>b. Walls</i> <i>c. FB Email</i> <i>d. FB Chat</i> <i>e. Other</i>
18	<i>Are you a member of a FB group?</i>	<i>a. Yes</i> <i>b. No</i>
19	<i>If yes, did you ever post a message to the group?</i>	<i>a. Yes</i> <i>b. No</i> <i>c. N/A</i>
20	<i>Did you ever visit a FB group? (wall, description, discussion)</i>	<i>a. Yes</i> <i>b. No</i>
21	<i>Have you used FB in other classes at a university?</i>	<i>a. Yes</i> <i>b. No</i>
22	<i>If yes, for what classes and in what ways?</i>	
23	<i>How do you think you could use FB in foreign language classes?</i>	
24	<i>What purpose(s) could FB serve in language classes?</i>	
25	<i>How do you think using FB in our class could benefit to the development of your French?</i>	
26	<i>Do you visit forums? (discussion boards)</i>	<i>a. Yes</i> <i>b. No</i>
27	<i>If so, how frequently do you visit forums?</i>	<i>a. Once a day</i> <i>b. Once a week</i> <i>c. Once a month</i> <i>d. Never</i> <i>e. N/A</i>
28	<i>Do you participate in forum discussions?</i>	<i>a. Yes</i> <i>b. No</i>
29	<i>Do read others' forum postings?</i>	<i>a. Yes</i> <i>b. No</i>
30	<i>Do you consider yourself multi-literate (in other words, you are able to use appropriate language in different electronic media) in English?</i>	<i>a. Yes</i> <i>b. No</i>
31	<i>Do you consider yourself multi-literate (in other words, you are able to use appropriate language in different electronic media) in French?</i>	<i>a. Yes</i> <i>b. No</i>

## Appendix B

Note: Items 1-22 of this posttest are the same as in Appendix A.

23	<i>What purpose(s) could FB serve in language classes?</i>	
24	<i>Do you visit forums? (discussion boards)</i>	a. Yes b. No
25	<i>If so, how frequently do you visit forums?</i>	a. Once a day b. Once a week c. Once a month d. Never e. N/A
26	<i>Have you visited a French language forum to try to "test" your knowledge of French reading or writing?</i>	
27	<i>Do you participate in forum discussions?</i>	a. Yes b. No
28	<i>Do read others' forum postings?</i>	a. Yes b. No
29	<i>Do you consider yourself multi-literate (in other words, you are able to use appropriate language in different electronic media) in English?</i>	a. Yes b. No
30	<i>Do you consider yourself multi-literate (in other words, you are able to use appropriate language in different electronic media) in French?</i>	a. Yes b. No
31	<i>What did you think about the linguistic observation activity on a FB group "j'aime le foot"?</i>	
32	<i>What did you think about the linguistic observation activity on the vacation forum?</i>	
33	<i>What did you learn while conducting both these "investigations"?</i>	
34	<i>After having completed these tasks, would you be more inclined to visit and participate in a forum on your own?</i>	a. Yes b. No
35	<i>How might looking at an analyzing currently used language be helpful to learning a second language?</i>	
36	<i>As part of the activity, did you discover words/phrases that you had never seen your textbook? (please give examples)</i>	
37	<i>Would you like to do more of these tasks in the future? Why or why not?</i>	

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**Editor's Note:** This study recognizes that distance learning courses based on reading and writing skills may work to the disadvantage of learners who are apprehensive about their writing skills. Interactive multi-media, group activities and portfolios would provide a wider range of learning opportunities - and formats - to support these students in a comfortable learning environment.

## **Writing apprehension among online adult college students: Intelligent Design or missed opportunity?**

**Kenda S. Grover and Michael T. Miller**  
USA

### **Abstract**

The current study explored the use of online courses targeted at adult students and how adult student apprehension about writing correlated to student self-perceptions of success. Using a sample of 258 adult students enrolled in professional, associate degree-required courses at a mid-western community college, a strong, negative correlation was found to exist between writing apprehension level and academic achievement, indicating that in high-reading reliance courses, adult students with high apprehension about writing as the primary method of instruction, fared worse academically than those with normal apprehension about writing.

Online offerings of postsecondary education have become a mainstay of contemporary higher education, with nearly 4 million undergraduates taking at least one online course each year (Kirk, 2010). Initially offered primarily by proprietary institutions, public and traditional higher education institutions have aggressively moved into the offering of online programs to both fulfill their access-oriented missions and to capitalize on opportunities to enhance enrollment and generate tuition dollars. (Miller & Morris, 2008; Kirk, 2010). Whether intentional or not, these online offerings have proven to be particularly attractive to adults who work full-time, have families to care for, and are often pursuing degrees or certificate programs on a part-time basis and that particularly have relevance to personal career advancement.

Online or technologically mediated instruction is the most recent version of non-traditional higher education to be offered for working adults. By allowing adult learners the freedom to learn anytime, anywhere, these programs have the ability to breakdown access barriers. Even though they can increase the ability of adults to participate in postsecondary education, this does not mean that the instruction offered through the online course experiences matches well with the learning styles of adults.

Research has shown that adult learners tend to learn best in environments where they can process information in a manner that relates to their life experiences, and that they can inquire and challenge information so that it fits into their understanding of their own life stories (Wynn, 2006). One of the difficulties for adult learners is that when information is presented in one-dimensional formats, such as text based only courses, learning can be problematic and less effective than other teaching methods. This is particularly true in online courses, as many utilize a reading-writing and written-discussion based method of instruction. And although there are a wide variety of strategies to engage online learners, and there are even best practice rubrics and protocols for offering online courses, there remain a finite number of particularly low-cost strategies that can engage adult learners in a meaningful fashion. Therefore, the ability of learning-style responsive instruction is particularly important for adults (Steinbach, 2000) and must be addressed in online learning environments.

How adult learners respond to written based instruction is the focus of the study. Specifically, the purpose for conducting the study was to identify to what extent there is a correlation between writing apprehension in online course environments and academic achievement. As an exploratory study, a single case Midwestern community college was utilized for data collection.

## Background of the study

### Adult learners

Adult learners, often referred to as nontraditional students in higher education, now represent a significant percentage of college enrollment and they stand to gain the most from online course offerings and degree programs. The National Center for Education Statistics (2002a) describes a nontraditional student as one who balances family and work responsibilities that challenge their ability to persist to degree completion. They are often characterized by a delay in their enrollment in that they do not enroll in postsecondary education the year they graduate high school, they often attend part time, are financially independent from their parents, have dependents other than a spouse, are single parents, and do not have a high school diploma. More students than ever before fall under the nontraditional designation, and increasingly they are choosing innovative, flexible programs that fit with their life circumstances.

This description of the nontraditional student demonstrates how diverse the population appearing under this designation can be. In fact, most students fall into one or more of these categories (Klein-Collins, Sherman, and Soares, 2010). Any one of these factors designating a student as nontraditional has the potential to impact their success in the collegiate environment.

There are other attributes that characterize this population and differentiate them from traditional students in higher education. Their reasons for entering or returning to college or participating in a formal learning experience are varied and multifaceted, but the underlying motivation to participate is often job-related (Merriam, Caffarella, and Baumgartner, 2007). Students are looking to advance in their current position, for example. Life and career transitions serve as catalysts as well (Aslanian, 2001).

The expectations adult learners have regarding their education is also decidedly different from the traditional student who enters college immediately after receiving their high school diploma. Knowles (Knowles, Holton, and Swanson, 2005) asserted that there are six assumptions about adult learners that should guide instructional planning. First, adults need to understand why they need to know something and how it will impact the quality of their lives. Second, they need to be seen as capable of setting the direction for their own learning, independent of a teacher or facilitator. In other words, they need to be self-directed. Adults also typically bring with them an amount of life experience that should be acknowledged and should serve as a resource in the classroom. This experience can also serve as a detriment in that adults have established habits, perspectives and biases that may interfere with their willingness to learn new things. Fourth, adults typically have a readiness to learn something new that will benefit their ability to cope with real-life situations. Next, their orientation to learning is life-centered, or task or problem-centered, rather than subject centered. Finally, adults are as much internally motivated to learn as externally motivated, although negative self-concept can interfere with this motivation.

Despite their life experiences, areas of expertise in their work lives, and motivation to learn something that will be of benefit to them, adult learners face fears about their academic performance, as well as fears of a more personal nature, when they engage for the first time in college-level coursework or when they return after a lengthy absence. For example, they are not certain how they will fit in to the college environment, how they will be able to afford the tuition costs, or how they will be able to manage the stress that the additional responsibility of being a student brings. In some cases they have failed in prior attempts with formal learning. Feeling that they are competing with younger students and lacking confidence in their capacity to earn good grades compounds their anxiety. Additionally, they are sometimes very unsure of their skills that are academic in nature, such as test taking, reading, math, and technology (Davis, 2004).

## Writing apprehension

Writing apprehension is a state (as compared to trait) related term that makes reference to a level of discomfort associated with the real or perceived thought and action of writing. Developed by Daly and Miller (1975) as an extension of communication apprehension, writing apprehension has generally been associated with lower levels of self-esteem, self-worth, and general self-concepts, and ultimately, career choice (Daly & McCrosky, 1975; Erkan & Saban, 2011). Hayward (1991) referred to the real or anticipated fear of writing as the 'resistant writer,' and that this fear resulted in two reactions by students: avoidance (or flight), or to fight the situation or process, including open hostility toward teachers or others who made judgments about the writing.

Teacher attitudes about writing have also been correlated with instructional choices (Claypool, 1980; Gere, Schuessler, & Abbot, 1984; Kaywell, 1987). Frequently, for example, teachers with low writing apprehension tend to require more and varied writing activities, and teachers who have a discomfort with the writing process require less writing for assessment or in-class activities. Further, Kaywell (1987) even found that teachers can transfer their fear or discomfort of writing onto the expectations of students through their behaviors and language about the writing process. Do you happen to know in what way this occurs?

Although there has been no definite determination of the causes of writing apprehension (Cope, 1978; Fox, 1980; Smith, 1984), there have been consistent findings that academic achievement and writing apprehension are correlated (Faigley, Daly, & Witte, 1981; Marx, 1991; Walker, 1992). Additionally, written interactions can frame how students and faculty (and among fellow students in class) cooperate and learn from each other, a key catalyst for learning for many adult learners (Galbraith & Jones, 2010).

Writing apprehension has not been studied or reported widely in much of the literature related to learning-style instruction for adults; however, as Gold (2005) noted, technology does present a different series of challenges for adults, including writing in technology mediated environments. As Finch and Rahlm (2011) reported, there is a strong need for faculty members and higher education leaders to recognize the differing needs of adults in online instructional environments, and that this recognition must include some of the concerns about interfacing with technology, inclusive of apprehension about technology, writing, and communicating.

## Research methods

As the purpose of the study was to describe the extent of a correlation between writing apprehension in online course environments and academic achievement among adult students, a single case study institution was chosen from which to collect data. The case study institution was a comprehensive, Midwestern community college of approximately 5,000 students enrolled in certificate, diploma, and degree programs. Of the 5,000 students, approximately 1,500 were enrolled in online programs, and of those, 325 were enrolled in associate degree programs (the others were enrolled in technical certificate or diploma programs). The 325 students enrolled in the Fall, 2010 semester included 258 who were over the age of 22, and this population was selected to be included as the study sample. All 258 students were enrolled in the associate of applied science degree program, and were classified as at least a half-time or greater enrolled student (at least six credit hours).

The sample was distributed, via email, the Daly and Miller (1975) Writing Apprehension Test (WAT), a publicly available survey instrument developed in the 1970s to measure an individual's writing apprehension level. The 20-item survey allows respondents to rate their agreement level with each item on a five-point Likert-type scale (1=Strongly Disagree progressing to 5=Strongly Agree) and produces a single WAT score between 20 and 100.

The invitation to participate in the survey was sent to all 258 students at the community college in October 2010, with three follow-up email messages sent during the following month, including a special invitation to participate from the college's president. A total of 162 usable responses were received, resulting in a 62% response rate.

## Findings

Responding adult students had an average writing apprehension score of 64.7, with a hypothetical mid-point of 62, meaning that these students had a slightly higher level of writing apprehension than the general public. When the WAT scores were separated by self-reported grade point average, those with the lowest grade point average (2.5 or below on a standard 4.0 scale) had the highest writing apprehension level (WAT=73.1). Conversely, those students with the highest self-reported grade point average (3.6 - 4.0) had the lowest writing apprehension level (54.7; see Table 1).

**Table 1.**  
**Average WAT Scores by Self-Reported GPA**

<b>GPA Range</b>	<b>WAT Score</b>	<b>n</b>	<b>Writing Apprehension Level</b>
2.5 and below	73.1	37	Moderately high
2.6-3.0	66.0	86	Moderate
3.1-3.5	56.2	20	Moderate
3.6-4.0	54.7	19	Moderately low

Respondents were then classified, through self-reporting, whether they were a "younger adult," with an age at their last birthday as under 45, or an "older adult," being over the age of 45. These categories were considered dichotomized variables and a point-biserial correlation coefficient was then computed with WAT scores. The correlations were  $r_{pb}=.48$  and  $r_{pb}=.77$ , respectively, with the older adults having a stronger correlation with WAT, suggesting that younger adults had lower writing apprehension scores online and that there is a stronger positive relationship between chronological age and higher writing apprehension levels.

## Discussion

Findings of the study, although limited to one case study community college, do suggest that older adults do have higher levels of apprehension. This has powerful implications for educational institutions as they look to expand degree offerings and completion to the existing adult workforce. Findings also suggest that writing apprehension makes a difference in a student's academic performance, meaning institutional leaders, instructional designers, and policy makers need to be aware that some adults might be more at risk if they have higher WA levels, and that could lead to higher college drop-out rates, lower levels of success or completion, more difficulty scheduling classes, etc.

The findings also suggest that there is tremendous validity in exploring the impact of technological media on generational differences among learners. Specifically, institutions and policy makers can run into difficulty creating access via online learning opportunities that cannot be realized for certain populations due to, possibly, generational differences. This impacts not only how state departments and legislatures approach improving college completion rates, but also impacts decisions to fund student aid in proprietary online institutions. Similarly, it might not be fair to proprietary online institutions to expect high completion and retention rates if serving certain populations are problematic to begin with. Subsequently, the findings mean that those professionals working in areas such as transitional programming, adult education, and



orientation need to collaborate more strongly to find effective ways to train learners before they invest significant time and resources into entering degree programs.

Future research should most certainly look to expand the sample and stratify data on different definitions of adult learners (outside of the traditional chronological age definition). Further research might also explore learning outcomes from data for adults in online environments and the potential variance in writing apprehension that can be attributable to their success.

Apprehension, anxiety, and other concerns that impact success in an academic environment are not always evident to the learner, or recognized by the educator. This study illustrates the idea that each online course does not represent a homogenous group of learners; rather, each student's abilities, and prior learning experiences set them apart from other students in ways that are not typically visible or easily ascertained. Ideally, instructors will make themselves aware of those preemptive efforts that can be made to help them identify academic issues that will impact student success early, thus enabling adult learners to be reach their full potential in the online setting,

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**Editor's Note:** The cost of instruction is difficult to calculate and compare because there are so many uncontrolled variables between institutions, and even among programs in the same institution. This study disregards fixed assets to get a picture of operating costs to develop distance learning programs.

## **Activity-based costing models for developing online courses.**

### **A case study**

**Chris Garbett**

**United Kingdom**

### **Abstract**

The delivery of courses by on-line distance learning offers clear cost advantages when compared to traditional face-to-face tuition. Removing costs incurred in fixed assets, particularly accommodation costs dramatically lowers the overall costs; and the costs per unit, of such on-line courses. Further cost advantages also occur with greater outreach of such courses to a wider pool of students who would not otherwise be able to engage in traditional face-to-face courses.

Whilst the delivery costs can be assessed on an activity-by-activity basis; the initial development costs are more speculative. Wildly varying costs have been cited, anecdotally, including costs in excess of seven figures where there has been a broadcast main stream television series accompanying the course.

This paper utilises data from a case study of developing a web based distance learning module. By utilising a well-established pedagogic method, and available web based material, costs have been kept down. A detailed activity log was kept during the development process and this revealed that the module was developed over the equivalent of 24 hours, costed at £57 per hour; approximately £1400 for a Level Four module.

**Keywords:** financial cost, activity based costing, development, finance, cost modeling, development

### **Introduction**

Funding Higher Education is a topical and urgent cause for concern, world-wide.

Dame Lynne Brindley, Chair of the UK's Online Learning Task Force, in an interview in the Times Higher Education (2010) stated that "the best examples of on-line learning were not cheap alternatives". The same issue also carried a report that budget cuts are driving The University of California, Berkeley to offer fully online undergraduate degree programmes. The growth of Massive Open Online Courses (MOOCs) is well-documented and in the UK, a consortium of Universities is launching an online project (BBC News 16 Dec 2012). However, whilst web-based distance learning has been in operation for several years and there is a wealth of research into pedagogic, andragogic and heutagogic models for developing and delivering web-based distance learning material; research in to the actual costs of such development and delivery has been limited.

A figure of \$15,993 Canadian Dollars for 237 hours of development time was cited for developing an online course in British Columbia, Bartolic-Zlomislic & Bates (1999). This referred to a study undertaken in 1997 when the use of VLEs and Learning Objects was in its infancy.

Bacsich et al (1999) produced Sheffield Hallam's study into the Costs of Networked Learning. This study, useful though it was, was more concerned with establishing methodologies for assessing the costs of online delivery of courses, than with researching actual figures. Again, this study is more than 10 years old and the changes in technology; and the availability of computing power, would distort many of the findings.

In 2002, Wentling and Park published their analysis of the costs of developing an E-Learning programme at the University of Illinois. Development costs for the programme were set at \$156,000 USD. This included salary and on-costs for several members of staff. Despite detailed analysis of on-going expenditure the study states that *“Even though the start-up cost of e-learning programs has a great impact on the breakeven point, start-up costs for this program have not been considered in this study.”*

Garbett (2004) developed a 5 year DCF chart showing the costs in developing and delivering a distance learning course. Again, however, the development costs were based on estimates rather than actual figures.

More recently Tucker and Neeley (2010) used an Activity-based Costing approach to examine the costs of supporting on-line courses. Depending on the support model used, costs varied between \$431 UD to \$3676 for supporting the course. Again, however, it was difficult to disaggregate the development costs from the on-going support and maintenance costs

From the foregoing, albeit brief, literature review; there has been little research into the actual costs of developing a module by web-based distance learning, using an Activity-Based Costing methodology and empirical data. This paper seeks to fill this gap.

## **Pedagogy**

Leeds Metropolitan University has delivered the on-line MSc Facilities Management, MSc Building Surveying, and MSc Quantity Surveying Commercial Management courses for several years. Working in conjunction with an Associate College, the Leeds College of Building, the University also delivers a Foundation Degree (FD) in Facilities Management; and a top-up BSc in Facilities Management, both delivered by web-based distance learning. Additionally, the University delivers the Professional Qualifications of the British Institute of Facilities Management, again by web-based distance learning.

The author was tasked to write a module for the FD; “Property and Space Management”. This is a Level 4 (first level of Higher Education) module comprising a nominal 150 hours of study for a 15 credits. The module specification was already clearly drafted and had been previously approved. Module Learning outcomes were specified as:

“On completion of this module, students will be able to:

- Understand Landlord and Tenant relationships, property costs, building types
- Appreciate the role of property and estate strategies, and the need for property information.
- Understand the impact of building types, building design and user needs on property utilisation
- Undertake simple space planning and relocation exercises.”

Assessment for the module was specified as:

- “Formative: Individual quizzes and exercises.
- Summative: 2 coursework assignments comprising a Space Planning exercise 50% plus an Unseen Examination 50%”

The author, and the course’s, preferred pedagogic method for developing Distance Learning Material is the well-established “wrap-around.” Method, first identified by Henry (1994) cited by Brown (2009) “Exploring the Tension between ROI and Pedagogical Design” inter alia.

With this method, the distance learning tutor provides study guides which lead the learner around other materials, e.g. textbooks, on-line resources, journal articles etc. The advantages of this method are that the links are to the most up-to-date material, there is less authoring for the tutor to undertake, the learner is exposed to a variety of styles and materials, and the learner becomes accustomed to searching out supporting material for his or herself.

The disadvantages are that the method is resource heavy and requires a lot of research on the part of the tutor.

The second pedagogic method to be employed was to start with the assessment. Given the specified learning outcomes; and the specified assessment methods; the first task was to develop an assessment that would be suitable for on-line delivery, sufficiently challenging and interesting to hold the student's attention; and would enable the student to evidence that they had obtained the required Learning Outcomes.

It was decided that a case-study; in two parts, would provide a suitable assessment method. To make the assessment topical, the scenario given was that the student is acting in the Facilities Management Department of a Government Ministry based in London. The Ministry is faced with a need to achieve very significant savings in the immediate term and intends to relocate out of London to cheaper premises in the regions. For the first part of the assignment, students have to calculate the size of premises required then, undertake a web search, to identify 3 premises that could be suitable and prepare a report on those premises for consideration by their senior managers. For the second part of the assignment students are given a plan of a suitable building and they have to design a suitable layout plan to accommodate specified staff and functions; and identify likely cost headings in the proposed move.

Having established the assessment, the next task was to identify the learning required and divide that into sections suitable for on-line delivery; Units and Topics, and to locate relevant resources.

A limited amount of material was already available on a different, Level 7, on-line course. This could be edited to suit the purposes of the Level 4 course, however, the degree of editing was such that the material was effectively, re-written; and new resources were sourced. By far the majority of material was written from new specifically for this module. The author is a very experienced academic in this field so the authoring was largely encapsulating the inherent knowledge of the academic author.

### ***Technical considerations***

The material was written in Word and uploaded either as a Word document; or as HTML documents. Links were embedded in the document text where appropriate; or separately included on the VLE page, if appropriate. For example, essential documents, videos etc could be directly embedded; secondary resources could be included in a list of further reading.

During the course of the development, the author converted from the existing, familiar version of Office to Office 2007. This caused some delay in production as the new versions of the Office suite had to be learned. Similarly, the material was uploaded onto the College's VLE, a version of Blackboard with which the author was not familiar and, again, there were delays occasioned by the learning curve.

### ***Costing methodology***

Developing this module was seen as an opportunity to investigate the costs involved in developing on-line modules.

Utilising an on-line stop-watch, a careful log was kept of the time and activities undertaken. The log initially recorded: Date, Time, Details of the Operation, Time Elapsed. Interestingly, a

significant amount of the development work was undertaken outside of normal office hours, though this analysis lies outside of the scope of this paper.

**Table 1**  
**Activity log**

Period	Time	Operation Details	Time Elapsed
1	17.00	Outline	4 minutes
2	11.00	Identified suitable Govt. dept and structure, requirements Initial research into office rents in London and region	1 hr 27minutes
3	17.00	Finalised assessment and marking guide	54 minutes
		Searches. JORUM - nothing of relevance. MERLOT - Nothing of relevance Google Scholar	1 hr 11 minutes
4	11.00	Searching estate strategy, space planning	30 minutes
5	12.45	Writing Unit 1 Topic 1 3 pages	1hr 18
6	15.10	Writing Unit 1 Topic 2 2 pages	1hr 08
7	19.20	Preparing tutorial questions	8 minutes
8	15.00	Unit 2 Topics 1 &2	1hr 45
9	16.00	Downloading material from other site, familiarisation with VLE	30 minutes
10	16.30	Starting to edit and re-format existing material for Unit 4	21 minutes
11	12.45	Further editing Topic one. Research and writing Familiarising with new software	3hr 30 minutes 1 hr.
12		Topic two space management	1 hr 25 minutes
13		topic 3 research	2 hr
14		topic 3.1 writing	1 hr
15		writing re-writing re-formatting formative tests	4 hr
16		further editing	30 min

Total time 23 hrs 41 minutes

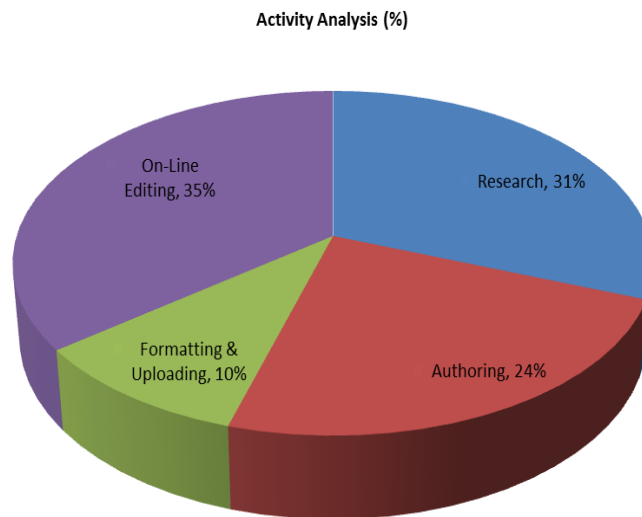
This raw data was then refined into further categories of time spent in: Research, Authoring, Formatting and Uploading, On-Screen editing. These formed the Activities for an Activity Based Costing Model.

This further analysis results in the following activity table. For comparability, timings are given in minutes

**Table 2**  
**Activity Analysis**

<b>Operation</b>	<b>Research</b>	<b>Authoring</b>	<b>Formatting &amp; Uploading</b>	<b>On-Line Editing</b>	<b>Total Time Taken</b>
Outline		4			4
Identified suitable Govt. dept and structure, requirements Initial research into office rents in London and region	87				87
Finalised assessment and marking guide		54			54
Searches. JOURN - nothing of relevance. MERLOT - Nothing of relevance Google Scholar	71				71
Searching estate strategy, space planning	30				30
Writing Unit 1 Topic 1 3 pages		78			78
Writing Unit 1 Topic 2 2 pages		68			68
Preparing tutorial questions		8			8
Unit 2 Topics 1 & 2	60	45			105
Downloading material from other site, familiarisation with VLE			30		30
Starting to edit and re-format existing material for Unit 4			21		21
Further editing			20	190	210
Topic one. Research and writing Familiarising with new software	30	30	30	30	120
Topic two space management	40	20	10	15	85
topic 3 research	120				120
topic 3.1 writing		30	30		60
writing re-writing re-formatting formative tests				240	240
further editing				30	30
<b>TOTALS</b>	438	337	141	505	1421

The % breakdown of activities can be represented as a pie chart.



**Figure 1 Pie chart of activities**

### **Cost analysis**

For this module, all activities were undertaken by the author, an academic, time costed at £57 p hour. Thus 23 hrs. 41 minutes (say 24 hrs) @ £57 p hour<sup>11</sup>

Actual Cost £1,368

Of the activities; Research (31%) 438 minutes, and Authoring (24%) 337 minutes, total 12 hrs 55 minutes, say 13 hrs can be considered appropriate academic work.

The remaining activities; Formatting and Uploading (10%) 141 minutes, and On-Line Editing (35%) 505 minutes, total 10 hrs 46 minutes, say 11 hours would be better undertaken by a Learning Technologist. @£49 p hour<sup>12</sup>

This then gives revised costs of:

Academic Costs 13 hrs @ £57 p hour	£741
Learning Technologist Costs 11 hours @ £49 p hour	<u>£539</u>
<b>Total revised costs</b>	<b>£1,280</b>

It is likely, furthermore, that the Learning Technologist would be more proficient at using the VLE. In particular, formatting and re-formatting the on-line formative tests took 4 hours, including a referral to the technical help desk. It is reasonable to assume that the Learning Technologist would be able to achieve at least 33% savings in time.

The revised projected costs, therefore, would be:

Academic Costs 13 hrs @ £57 p hour	£741
Learning Technologist Costs 7.25 hours @ £49 p hour	<u>£355</u>
	<b>£1,096</b>

<sup>11</sup> Assume Grade 8 Spine Point 43

<sup>12</sup> Assume Grade 6 Spine Point 34



### **Unresolved costs**

At the time of writing two activities were yet to be undertaken and costed. The module required three Elluminate tutorials. The cost of developing the tutorial material is the subject of a different cost analysis and utilized OER developed for another module. The assessment also called for an unseen end exam. The cost of writing the exam papers had not been considered. Both of these activities, however, could be expected to be undertaken in a traditional, face-to-face course so the costs for an on-line course should be not dissimilar to the costs for an on-line course.

### **Conclusion**

From the analysis and costing of the development of the module “Property and Space Management” the costs are broadly in the range; £1,100 - £1400 to develop the module. This equates to £6.70 to £9.30 per nominal student hour.

The costs of delivering the module also need to be considered but that, again, is the subject of a different paper.

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Chris has been developing and delivering on-line courses for Leeds Metropolitan University and the Open University for several years. The Leeds Met MSc Facilities Management is believed to be the world's first fully online MSc.

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**Editor's Note:** Globalization is a reality of modern life and preparation should begin through teaching and learning in the classroom. The Internet provides opportunities for students and teachers with different cultural and experiential backgrounds to communicate with each other, learn about each other, and learn to work together. This requires teachers to think "out of the box" to develop meaningful experiences and growth to support socio-economic, cultural, and political changes to embrace the international community.

## **"Out of the Box" via Global Link**

**Bomna Ko and Boni Boswell**

**USA**

### **Abstract**

Higher education has been highlighted as the crucial contributor to respond and integrate current demands and changes with globalization (Dewey & Duff, 2009; Kienle, 2005). Several strategies for integrating and assessing an international dimension of higher education have been discussed. This study was designed to gain a better understanding of students' experience with and view of global linking with international partners. A total of 14 students (F=5, M=9) enrolled in a graduate distance education course engaged in a seven-week global link project participated in this study. An open-ended questionnaire and reflection report were collected and analyzed using content analysis. Trustworthiness and credibility were ensured through peer review and debriefing, negative case analysis, and member checking methods. Three themes emerged: 1) avenue to newness, 2) worthwhile experiences, and 3) learning via individual correspondence. Expansion of knowledge and experiences about another culture and people through the global link project contributed to their positive perceptions about the project. This study concluded that the global link experiences demand faculty effort to plan, activate, and assess a program as a faculty level of approach to internationalization in higher education.

**Keywords:** internationalization, globalization, higher education, on-line exchange, global link

### **Introduction**

Encompassing a globalization agenda in the education community is an anticipated demand. An increasing emphasis on "the knowledge economy, demographic shifts, mobility of the labour force, and increased trade in services" (Knight, 2004, p. 22) has focused more attention on the development of globally competent citizens in a global era (Dewey & Duff, 2009; Hunter, White, & Godbey, 2006). Higher education has been highlighted as the crucial contributor to respond and integrate current demands and changes with globalization (Dewey & Duff, 2009; Kienle, 2005). Numerous institutions of higher education in the United States have focused on developing leaders who can respond effectively to the dynamic globalization of the world. Thus, an international dimension of higher education has recently become a central issue, leading to a "mainstreaming of internationalization" (Hahn, 2004, p. 123) in higher education institutions.

Although a definition of internationalization in higher education has not been standardized, Knight (2004)'s delineation of "the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of post-secondary education" (p. 2.) helps to conceptualize many general approaches to internationalization at the institutional level. Several strategies for integrating and assessing an international dimension of higher education have been discussed, for example, by Dewey and Duff (2009), Knight (2004), and Mok (2007), who presented the internationalizing process in higher education in Asian. Dewey and Duff (2009) introduced four categories of international activities based on the international initiative at the University of Oregon: 1) faculty research and teaching, 2) curriculum, 3) study abroad programs, and 4) other areas of activity. Faculty research and teaching include participating in international research works (e.g., conferences, publications, and grants) and teaching through personal and professional networks. Emphasis on these activities in higher education has encouraged the

growth of interest in and publication of studies focusing on the international dimension of higher education since the mid-1990s (Kehm & Teichler, 2007; Teichler, 2005). Curriculum related activities include development, implementation, and assessment of an international dimension in coursework. Such courses may involve virtual international instruction and may influence the design of continuing education and distance learning programs. A shift of university curricular in East Asia from the conventional teacher-oriented approach to a student-oriented approach demonstrates a change to internationalization in higher education (Mok, 2007). Study abroad is one pervasive and powerful program that develops internationalized students (Mok, 2007). This program, though, requires “affiliation and partnerships with external programs” (Dewey & Duff, 2009, p. 494). The fourth category introduced by Dewey and Duff (2009), termed “other areas of study”, includes international student exchange programs, development of international relations, and institutional partnerships with international universities. These four categories provide potential opportunities, programs and activities that can be approached at individual (e.g., faculty, students) or institutional levels to meet the needs of internationalization in higher education.

The internationalization of higher education has occurred slowly from different levels and approaches. For example, each year a steady rise in the number of study-abroad students in higher education has been reported. According to the Open Door report, the number of US higher education students has more than tripled over the past two decades (Institute of International Education, 2012). Also, understanding of the world has been incorporated in education through the diverse lenses of new fields, such as multicultural education, women’s studies, ethnic studies, cultural studies, and human rights education (Kienle & Loyd, 2005). In addition, university-sponsored international cultural events have been initiated as a way to incorporate international understanding at the university level (Klak & Martin, 2003).

Along with these institutional level approaches, on-line exchanges with international partners, led by individual faculty with less institutional control, have been introduced in diverse fields. For example, the foreign language field has incorporated online exchanges with international partners in target language countries not only for learning the foreign language but also for developing intercultural competence among students (Belz, 2003; Elola & Oskoz, 2008; O’Dowd, 2003). Concerns about global leader development in the business field led to the use of online exchanges to provide and support an experiential learning process (MacNab, 2012). In addition, global linking has been used in the education field to expose students to the professional issues in other country (Ko, Boswell, & Lee, 2009).

Although the role of teacher education is to develop teachers who are teaching a currently changing student population, the limited infusion of internationalization in education to develop globally competent teachers has been criticized (Longview Foundation, 2008). The positive and negative impacts of globalization on education have been discussed by several commentators (Dewey & Duff, 2009; Mok, 2007; Rouhani & Kishun, 2004; Woolf, 2002), with limited examples of implementation of global perspectives in the education field. As explored in previous education research, this study incorporated online exchanges at an individual faculty level as an exemplary method to incorporate globalization into an existing graduate education course. Therefore, this study was designed to gain a better understanding of students’ experience with and view of global linking with international partners.

The following research questions guided this study:

What did students experience during global interactions with international partners?

How did students perceive and assess global links with Korean partners?

## Method

### **Data Collection**

This study employed a case study that allows “particularistic, descriptive, and heuristic” (Merriam, 1998, p. 29) information on the insight of participants. The global link project which consisted of online exchange and videoconferences with Korean partners was incorporated into one graduate distance education course, Professional Issues in Physical Education. The graduate students who had enrolled in the course and had been engaged in the seven-week global link project were asked to participate. A total of 14 students (F=5, M=9) agreed to participate in this study. This study was approved by the university institutional review board, and all participants consented to participate before data were collected.

Participants were asked to complete an open-ended questionnaire and reflection report after their participation in the global link project. These were designed to explore the participants’ perceptions of interactions with Korean partners and culture, their experiences during the global link, and what they had learned from the global link. The questionnaire was disseminated and collected online from all participants. The reflection report was sent to one of the authors of this study at the end of the global link project.

### **Intervention: Global link**

As presented by Ko et al. (2009), this study followed four steps to design and implement a global link project with South Korea partners in a distance education course: 1) establishing a partnership, 2) pre-planning for global link, 3) activating the global link, and 4) assessing student experiences. Instructors in the US and South Korea who agreed to deliver the global link actively interacted to make a plan for link schedules, methods, and content/topics to exchange with each other before initiating the global link project. During the first five weeks of the global link project, each student was assigned to one Korean partner and they interacted with each other through online communication tools such as email, social networks, etc. Students were encouraged to get to know their Korean partners and Korean cultures (food, dance, education system, etc.) during individualized interactions. The following two weeks were devoted to teleconferences to present and discuss four selected professional issues in physical education in each country: 1) teacher preparation process and requirements, 2) educational policy and physical education curriculum, 3) evaluation of teacher effectiveness in school settings, and 4) teaching physical education in schools. After seven weeks of the global link project, global link experiences were assessed through the open-ended questionnaire and reflection report.

### **Data Analysis**

The questionnaire and interview data were analyzed using content analysis which allowed coding and categorizing words, phrases, expressions, or statements that were mentioned most often and were associated with the research questions (Bazeley, 2003; Stemler, 2001). Authors of this study repeatedly read the data independently and cataloged emerging themes by examining, comparing, revising, and refining possible themes. Peer review and debriefing, negative case analysis, and member checking were used to ensure the trustworthiness and credibility of the findings.

## Findings

The goal of this study was to explore what participants experienced during the global link sessions and how they viewed the global link project after their interactions with their Korean partners. Three themes emerged in this study: 1) avenue to newness, 2) worthwhile experiences, and 3) learning via individual correspondence.

### ***Avenue to Newness***

One of themes most often mentioned by the participants related to the overall newness of the global link experiences. The global link was an avenue of newness in that it provided access to new people, culture, educational system, and technologies. Building new friendships with their Korean partners through the global link was expressed often; as DN stated, “We were fortunate enough to attempt communicating at all costs and valued our newly made friendship.” GG also expressed a benefit of the global link as meeting someone new from a country new to him; he explained that

One benefit that I can take from the project is the opportunity to learn a new part of the world for me... I also believe that I have someone that I can stay in contact with in Korea. I was able to meet someone new and possibly meet up with if I were ever to travel to South Korea.

The global link provided participants with opportunities to experience not only new people but also new cultures. BB commented that “I got to speak to someone I would have otherwise never had the opportunity to know, and I learned about a culture I would have never had the opportunity to visit or learn more about.” EB also recognized that one of the advantages of the global link was to learn about a new culture and mentioned that “One major advantage is learning about another culture. I believe you can never know too much about the people and different cultures that coincide throughout the world.”

The participants acknowledged learning about educational systems and professional issues which were new to them. BR appreciated learning about the educational system in Korea which is on the opposite side of the world, “I found it very interesting to learn more about a different educational system from an entirely different part of the world. Without this project, I probably never would have known anything about the Korean educational system.” In addition, participants found new ways to link to their professional work through the global link. TY appreciated the global link experiences as a way of exploring new ways of teaching; he stated that “I think first and foremost the project gave everyone involved a new aspect and ideas about teaching. We were given ideas that are used in another country that could be very beneficial in our own countries.” GI also spoke about learning new strategies through the global link in the following statement,

I think the global link has shown me how to connect and interact with other professionals in my field to gain not only a cultural appreciation, but also learning new teaching practices and possibly best practices from learning how others conduct their classrooms.

Since the global link was delivered through technology tools such as email, social media, and a teleconference program, experiences with new technology were positive for the participants. VA summarized her experiences with technologies through the global link project as, “this experience has opened me up to new technologies, that I had no idea even existed; I was amazed at how the Centra session was conducted.” CH expressed appreciation for using new technologies to meet someone new in a new country through the global link.

Getting on Skype was very helpful in getting to know my partner. I felt as if this was a big step in the process. The Skype was not that difficult to understand. If I had not taken the course, I would

have probably never considered Skype. I was very apprehensive at first to meet someone new and especially being from a different country. I do not encounter people from different cultures on a daily basis. This was a boundary that was not difficult to overcome.

### ***Worthwhile Experiences***

The majority of participants expressed a sense of gratefulness for the global link project and described it as beneficial and worthwhile, and as a truly unique and “out of the box” opportunity to experience the opposite side of the world. GG and HD expressed satisfaction with their global link experiences along with the information that they learned about Korea. GG stated, “I feel that I have learned an adequate amount about Korean culture. It was very valuable and interesting information to learn. I am grateful that I was able to be a part of this experience and found it very knowledgeable.” HD concurred: “I think the cultural learning and expansion of knowledge made this worthwhile and interesting.” DN also supported the benefit of this experience with the other side of the world, commenting that, “The project was beneficial too in how I was able to learn more about another teacher/student just like me yet from somewhere on the other side of the world.” BR could relate challenges that he experienced during the global link to what he found in his teaching experience in school. The global link experience helped him to understand more about his students from other countries; he noted that,

I also thought it was good that we had to work around language barriers and time barriers. It is similar to the challenges faced in the classroom on a daily basis. My first year teaching I had a couple of students that spoke little to no English, and I had to find ways around that in which to communicate with them.

### ***Learning via Individual Correspondence***

The first five weeks of the global link project were devoted to individualized interactions between US and Korean partners. The majority of participants in this study used email communication to learn and discuss with their Korean partners topics such as the culture, the educational system and professional issues. According to the data, participants gained a wide range of information and different experiences through email correspondence of their Korean partners during the individualized interaction period. Not all but most of the participants had difficulties in receiving response emails from their Korean partners and recognized it as a challenge or a barrier during the global link project. Several students were frustrated by a lack of email interactions. For example, BR noted that “the rate of email communication was a challenge.” TO explained, “My experiences with email with my Korean partner were very difficult and were full of challenges.” BB elaborated how her partner’s limited email responses affected her feelings and the global link project,

Biggest barrier I had with this project was not having a partner who was willing to email me back in a timely manner. This global link can only work if both partners participate and communicate to one another. When that isn’t happening, it makes the process extremely frustrating and challenging for all involved.

Limited email interactions resulted not only in limited interactions but also in limited learning about Korea. TY clearly presented this issue: “the limited communication from him made it difficult to get into the flow of things and get information directly from him.” VA had a similar experience to TY, according to her reflection report, “it was difficult to learn about the Korean culture, because it would almost take two weeks before I received an email in return in the beginning of our emails back and forth.”

In contrast, other students enjoyed the individualized interactions and learned a lot from their partners about Korean cultures and professional issues. GI noted the enjoyment of email interactions and her partner’s frequent correspondence: “I had a very positive experience with my

interactions with my global partners... I had a relatively easy time corresponding with my Korean partner via e-mail.” HD’s experience was similar: “My Korean partner was very prompt in answering his emails and his English was easily understandable. He and I had a lot in common and I enjoyed our interaction.” GG had a partner who had lived in the US so he could learn a lot about Korean cultures from his partner during the global link project. He noted that,

My Korean partner was able to communicate the similarities and differences to me very adequately. She understood culture in the US and was able to give me information about Korean culture that may have differed. I learned a great deal of information about her personally as well as about Korean culture.

## Discussion

This study aimed to gain a better understanding of students’ experiences and views toward a global link with international partners. Three themes emerged from open-ended questionnaires and reflection reports from 14 participants: 1) avenue to newness, 2) worthwhile experiences, and 3) learning via individual correspondence.

The theme *avenue to newness* represents participants’ experiences with new people, new culture, new teaching practices, new perspectives and ideas about teaching, and new technology that allows a connection with people from the other side of world through a global link. One suggestion for teacher education that Zhao (2010) provided to prepare teachers for the globalization age is to “shift its thinking from serving the local community to the global” (p. 428). Educational experiences offered in teacher education programs need to allow teachers to widen their views and to develop positive perceptions toward the world. To this end, the global link in this study provided students with an opportunity to experience different views from outside the box where they are situated. Utilizing technology that they had never have used before was also another new experience for the students, which was described by MZ as having “opened up a world for professional development.” Introduction of new technology, which is recognized as one of common outcomes from globalization (Kissock & Richardson, 2010), allows students to learn many different avenues to communicate with any part of the world. This supports the students’ experience of living in a “global village” (McLuhan, 1964) where distant people are intertwined through the development of communication technology.

The participants experienced varying degree of individualized interactions with their Korean partners. The frequencies of email correspondence appeared to be linked with amount of their learning about Korean cultures, as well as with their feelings about the global link project. Participants who experienced limited email interactions indicated those experiences as a challenge or barriers and gained limited information about Korean culture. However, participants who actively interacted with their partners expressed their experiences as positive and adequate to learn about Korean cultures. This finding supports the findings of previous studies associated with the impact of using email interaction with international partners. O’Dowd (2006) found that students who experienced limited connection with English partners in his study created negative stereotypes of their counterparts. In addition, email interactions in which different culture-related conversation styles were embedded resulted in misinterpretation of the target culture in Belz’s (2003) study. Although participants in this study specified their perception of Korea and Korean culture, the participants’ negative feelings about email interactions could possibly have influenced their perceptions. However, most of the participants in this study seemed to understand the Korean students’ difficulties with email conversation associated with language difference. As noted by several participants, they appreciated their difficulties trying to communicate in a second language, English. For example, BR understood the delay in his partner’s response as language difference and noted that,



There was a time where I found myself waiting for more messages to come, and later found out it was because my partner had trouble translating and forming ideas into English. It was really just something I took for granted, and had to become more patient and understanding of.

As reflected in BR's statement, participants in this study perceived the global link project as a worthwhile experience regardless of the varying degree of their email interactions with their Korean partners. Expansion of knowledge and experiences about another culture and people through the global link project contributed to their positive perceptions about the project. This finding supports the response of participants who experienced global link communication with international partners in Ko, Boswell, and Lee (2009) study, which found feeling of amazement at participants connecting with people on the other side of the world and having a live exchange. In conclusion, this study recognizes that global link experiences demand faculty effort to plan, activate, and assess a program as a faculty level of approach to internationalization in higher education. Moreover, understanding of the participants' learning and experiences from a global link with international partners should be reinforced in order to develop students who can effectively respond to the current globalization of the world.

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**Editor's Note:** The incredible resources available through interactive multimedia and the internet demand experimentation by teachers and students prior to adoption. Many if not most schools and colleges worldwide are in the process of adding distance learning programs and adding technologies used in distance learning to increase the effectiveness of their on campus offerings. Research is an important ingredient to determine the impact and optimize these new approaches.

## **The effect of website technology-based reading strategy instruction on EFL learners' reading comprehension**

**Khalil Alqatawneh and Rana Abu Ghaida**

**Jordan**

### **Abstract**

The purpose of this study was to examine the effect of using a technology-based reading strategy instructional program on enhancing reading comprehension skills of EFL learners. The subjects of the study consisted of 79 female 11th grade students. The subjects were divided into two groups, experimental and control, and were assigned to the levels of treatment. The study employed a reading comprehension test enclosing literal, inferential, and critical reading comprehension skills. The reading comprehension test was administered to the subjects before and after the treatment. One-Way ANCOVA and MANCOVA were used to detect the significance of differences between the study groups on the reading comprehension test. The results of the study showed that there was a statistically significant difference at the level of 0.05 between the mean scores of the two groups on the entire reading comprehension test, and on the three subscales of the reading comprehension test in favor of the experimental group. The results validated that computer-based reading strategy instruction – as represented in the technology-based involved in this study – yielded better achievements in EFL learning. The study recommended that teachers' training on the computer-based instructional strategy be encouraged to meet the requirements in EFL learning. It also recommended further replications of the experiment for different levels of learners.

**Keywords:** Computer-Based Instruction; Technology-based instruction; reading comprehension; reading strategies.

### **Introduction**

In the digital age, reading skills enhance students' abilities in so many areas such as students' independence of teachers and parents; they also allow students to participate independently in social life practices including reading newspapers and posters. Reading may help students broaden tastes and understanding of others. It makes their life meaningful, significant and interesting. In the global information-based society, English reading comprehension has become essential for sharing in ideas with others and obtaining up-to-date information in all fields of life. 90% of all information in the world's electronic retrieval systems is stored in English (Hasman, 2000). Moreover, Grabe and Stoller (2002) argued that reading is a vital academic language skill for foreign language learners. In academic settings, reading is considered to be the central way for learning new knowledge and obtaining access to alternative explanations and interpretations.

Carell, Devine, and Eskey (1998) pointed out that in the EFL setting, reading might represent an important approach to learn English since most students might not really need to talk or listen to speakers of this language, but they do need to be skilled readers for many reasons. Likewise, Sofsian (2006) argued that reading helps students keep in touch with modern writers and makes them sensible to universal issues. Hence, Blake (2010) mentioned that reading comprehension is a paramount key to the world.

Despite the fact that reading comprehension is very important in everyday life, many Jordanian secondary school EFL students encounter so many problems in reading comprehension. Those students face reading comprehension difficulties such as learners are not able to distinguish significant information from minor details, identify the logical connection between ideas in the text, infer the author's purpose for writing the text, differentiate between facts and opinions, draw logical conclusions from the text, recognize persuasive statements, and assess the accuracy of the information given in the text (Al-Salah, 2004; Tashtoush, 2008; Al-Momany, 2009).

A major reason for the Jordanian secondary stage students reading comprehension difficulties may be due to their unawareness of reading strategies. Al-'araj (2005) found that many of today's students did not have the reading skills needed for comprehension because they lacked the strategies required to think consistently in a clear analytic way. Furthermore, Salameh (2010) found that students with reading difficulty did not comprehend what they read because they lacked strategies for reading comprehension which could help them to be strategic readers.

In an attempt to overcome students' roadblocks in the path to comprehension, McNmara (2009) suggested that teaching strategies is one of the most effective means of helping students to overcome them. She added that strategies provide the means to tackle complex problems in more efficient ways and, with practice, the strategies lead to skills that become automatic and quick over time. Similarly, McNmara, Boonthum and Levinstein (2007) pointed out that strategy instruction is extremely needed and effective for struggling students, particularly those with lower reading skills. They added that it is important to recognize that reading strategies can be used to facilitate comprehension. And thus, mastering various reading strategies can develop students' comprehension.

In the reading comprehension domain, there seems abundant evidence that reading strategies improve literal, inferential and critical comprehension (Palincsar and Brown, 1984; Bereiter and Bird, 1985; King and Rosenshine, 1993; Ozgungor and Guthrie, 2004; Fuchs and Fuchs, 2005; McNamara, 2009). Similarly, Vandergrift (2003) believed that strategic competence is a complex skill that needs conscious development. In FL reading, for example, some students may paraphrase, underline, highlight or summarize the text unconsciously, whereas others may be conscious and purposeful in using such processes. Vandergrift (2003) went on to say that reading can be enhanced with practice when learners reflect on the process of reading without the threat of evaluation. Furthermore, guiding students through the process of reading provides them with the knowledge from which they can successfully complete a reading task; it also helps them to control their learning.

Effective teachers can use technology as an instructional technique to enhance their learners' reading comprehension abilities. As Boling (2008) put it, "In today's information-rich, digital age society, being literate involves much more than simply being able to read and write the written language (p. 95).

Technology is especially beneficial in strategy instruction because of its power to keep students interested while they are engaged in meaningful activities. Educators have to adjust their views then they have to use modern technologies in order to transform their instructional practices and to develop students reading comprehension. Students should be guided in improving their skills in using the Internet and technology to enhance their comprehension (Dill, 2010).

Furthermore, Siddiqui (2004) mentioned that the new instructional technologies have enhanced students' performance in many ways. The first is by engaging and involving students. The second is by empowering students; the new technology allows students to feel a pride of accomplishment when they view their output. Students become active producers of knowledge, whether they are sharing their findings with the world via a web page. The third is by fostering the development of higher-order thinking skills. Finally is by insuring student mastery; the new instructional

technologies allows each student to proceed through a topic at his/her own pace and repeat whenever necessary until mastery is achieved.

The computer environment influenced the teacher-student relationship, changing the nature of the EFL teacher's as well as the EFL student's role in the academic reading class. The computer-networked setting is effective when it combines the security and support of the traditional classroom and exposure to authentic reading material (Levine, Ferenz and Reves, 2000). The computerized environment enables teachers to provide assistance only when suitable and necessary. This empowerment of students in teaching reading leads to autonomy in using online resources in reading (Kilickaya and Krajka, 2010).

Jayachandran (2007) mentioned that as for school learners when it comes to collecting information from different sources they mostly depend on reading the Textbooks. When learners move to college their horizon of knowledge expands. They are expected to read more than one book for any given subject. This requires efficient ways of reading. He added that in this cyber age, where most of the academic activities are computer directed especially those related to reading skills, learning strategies can be enhanced using Computer Assisted Language Learning (CALL) method.

Additionally, Lee (2004) claimed that although there is a growing interest in the study of language learning strategies, few CALL programs seem to incorporate a treatment of this issue in the design. Few CALL multimedia applications have aimed to teach learning strategies using CALL tasks. Though few CALL tasks have been designed with the objective of such a treatment, the design seems to indicate a restricted view of learning strategies. Similarly, Tschirner (2001) suggested that the use of computers has become a crucial part of the process of foreign language learning. The environment of English learning strategies is not limited in the classroom or to computerized programs in this era anymore, due to the modern technologies such as the Internet. Language learners may surf the internet to read any update information. They may also communicate online with their friends, classmates, and teachers.

Leu (2002) suggested that the reading community needs to play an important role in the conversation of new literacy, a role that has yet to be filled adequately. Our work must concentrate on how new technologies are promoting reading comprehension. Moreover, Marin and Moncada (2010) suggested that teaching reading strategies is redefined through the use of the new instructional technologies such as the use of the Internet as a new literacy. Goolsbee (2000) pointed out that the use of Internet in educational systems has been growing rapidly in the last few years. He added that educators have to use technology-based instruction system in new learning programs to get the most important benefit from it which is convenience.

Moreover, Johanson-Glenberg (2005) mentioned that a major benefit is that if done properly, technology-based instruction is completely scalable with very low marginal cost. Education providers can potentially reach large audiences cheaply. She added that technology-based instruction is very good for automated type tasks where it might be expensive to pay teachers to simply cover the same repetitive tasks over and over again. Technology-based instruction offers beneficial individualized learning experiences for students. Another advantage offered by technology-based instruction is the flexibility of controlling the learning environment. Technology-based instruction is available to students throughout the day. Students can set up a schedule which benefits their personal preferences for time of instruction. Breaks from learning can be implemented on an as-needed basis. It can be accessed from places other than school; students can access assignments from nontraditional geographic locations (Smith and Meyen, 2003).

Jones (2007) claimed that the biggest benefit of technology-based instruction is that it eliminates the expense and inconvenience of getting the instructor and students in the same place. Opting for

technology-based instruction also allows teachers to update their materials across the whole network instantly. He also added that technology-based instruction provides an experience that contains three distinct learning styles; visual learners, kinesthetic learners and auditory learners.

In addition, DelVecchio and Loughney (2006) clarified that technology-based instruction motivates students to search and look for information by using different links and sites on the World Wide Web. They also stated that technology-based instruction is an interesting means for learning and can meet the needs of many different learning styles. Furthermore, Urdan and Weggen (2000) pointed out that those students taking an online course enter a risk-free environment in which they can try new things and make mistakes without being afraid of committing mistakes. After a failure, students can go back and try again.

Hinkle (2000) suggested that while being able to work at one's own pace can be an advantage; it can also be a disadvantage. This is true for learners who find it difficult to manage their time properly. These learners seem to be more successful with the structure of conventional learning. Similarly, Areskog (2000) mentioned that another disadvantage to technology-based instruction is the technology involved. Some people do not have ready access to a computer and Internet connection, and some who do have the needed equipment cannot really use to use it. Lack of interaction between teacher and student is another drawback to technology-based instruction. Some students need the immediate feedback that interaction provides.

Additionally, Ludlow (2005) maintained that technology-based instruction will be embraced by educators as offering education to a wide audience throughout the world. The success of technology-based K-12 instruction for students has yet to be validated through research. Most research of technology-based instruction has been completed with university students; therefore, any generalizations to K-12 students are limited.

As a result of the wide implementation of distance technology-based learning, the roles of both teachers and students have to be identified. An important identification of these new roles may arise by distinguishing the characteristics that are common to traditional classroom and technology-based teaching (Marin and Moncada, 2010). Hence, Shelton, Lane, and Waldhart (1999) suggested that the role of teachers is more useful as facilitator than as knowledge dispenser. Easton (2003) clarified that technology-based teaching should be effective and it is not about reading a text on the web and going back to the text book without using any means of communicating with others. Similarly, Wallace (2003) highlighted the importance of identifying new roles of teachers and students in technology-based courses. She clarified that teachers in such courses should be able to organize online discussions, present direct instruction, and provide immediate feedback.

In conclusion, some of the challenges facing online education can be lessened with a greater understanding of the advantages associated with using technology. Technology-based instruction will continue to become more thoroughly integrated into the education system. There are many advantages of using technology-based instruction in schools such as offering more classes to students and making learning more adjustable in order to meet students' individual needs. Nowadays, though there is still lack of the data being collected on the success of technology-based instruction, many schools will invest technology-based instruction in developing both teachers' training courses and students' classes. The development in learning environment influences the student-teacher relationship, which becomes a many-sided interaction among students, online materials, the vast community of the World Wide Web users, and teachers as facilitators. Therefore this study attempted to examine the effect of technology-based reading strategy instruction on EFL students' reading comprehension

## Statement of the problem

The current problems in reading comprehension in Jordan's public schools might be due to the fact that it is at most taught conventionally without using any contemporary instructional technologies such as the Internet. Thus, instruction that focuses on teaching reading strategies to help students become strategic readers and more self-regulated learners is not only promising but necessary, especially if they are taught via instructional technology. Therefore, the present study explored the effect of a technology-based reading strategy instructional program on the literal, inferential and critical comprehension of students.

## Research question

The study raised the question,

"What is the effect of a website technology-based reading strategy instruction on EFL learners' reading comprehension?"

## Operational definitions

For the purpose of this study, the following terms and concepts are limited to the following operational definitions:

**Reading comprehension:** it is the level of understanding of a text. This understanding comes from the interaction between the words that are written and how they trigger knowledge outside the text (Keith, Foorman, Perfetti, Pesetsky, and Seidenberg, 2001). In this study, the scores that the eleventh graders achieved on the reading comprehension test administered measures the reading comprehension skills.

**Literal comprehension:** is an understanding of meanings that are directly stated in text (Liu, 2010). For the purpose of this study, it includes recalling details and identifying facts directly stated in the reading text, and recalling reasons for certain events explicitly stated in the text.

**Inferential comprehension:** involves searching beyond surface meaning, identifying relationships among ideas, drawing conclusions and predicting outcomes (Huggins, 2009). In this study, it includes inferring additional details not explicitly stated in the text, and drawing logical conclusions from the text.

**Critical comprehension:** requires students to be able to make judgments and evaluations about the text (Roe, Stoodt-Hill and Burns, 2010). For the purpose of this study, it includes evaluating content, and identifying the author's purpose for writing the text.

**The technology-based reading strategy instructional program (WBR SIP):** It is a program developed by the researcher for the purpose of teaching reading strategies so as to develop the literal, inferential and critical comprehension of the 11th graders. This program focused mainly on teaching cognitive reading strategies (questioning, summarizing, note-taking, inferring, predicting and identifying main ideas).

## Significance of the study

It is hoped that this study will help the following stakeholders in different aspects. It may help provide EFL teachers with guidelines on how to teach reading strategies to achieve reading goals, guide curriculum designers to include reading strategies in the Jordanian English curriculum to make students think more critically and effectively, and contribute to the development of the learners' autonomy.

## Methodology and Procedure

### **Subjects**

The subjects of the study consisted of 79 first secondary grade students, enrolled in Tabaria comprehensive school for girls in Irbid First Directorate of Education during the academic year 2011/2012. The school was chosen on convenient grounds. It had two first secondary classes. The two classes were assigned to the levels of treatment by coin flip. The experimental group, consisting of 38 students, was taught by the technology-based reading strategy instructional program, and the control group, consisting of 41 students, was taught by the conventional method of teaching. The subjects had adequate computer skills since they have been taught computer skills for several years. They had prior experience on internet search, using forums and discussion boards.

### **Instrument**

For the purpose of this study, a reading comprehension skills test was developed. The test aimed to measure the students' reading comprehension skills. The texts for reading comprehension were selected from that used in on-line educational resource for English Language Education ([www.about.com/education](http://www.about.com/education)). The selection was guided by the learning objectives for English reading that are set for students in the first secondary class in Jordan. In this selection, equivalence of text types and appropriateness for the students were targeted. Therefore, expository and narrative texts aiming at the given age group intended for use in the context of English language education were selected.

It included three parts; each part had a passage followed by six multiple choice questions. The first two questions measured students' literal comprehension, the next two questions measured students' inferential comprehension and the remaining questions measured students' critical comprehension.

The literal comprehension questions involved: recalling facts explicitly stated in the passage, recalling a single action or event the sequence of several actions or events explicitly stated in the passage, recalling reasons for certain actions or events explicitly stated in the passage, and recalling results for certain actions or events explicitly stated in the passage.

The inferential questions involved: inferring the implied main idea in the passage, inferring the author's purpose for writing the passage, and predicting additional details not explicitly stated in the passage about a single action or event.

The critical questions involved: evaluating content and drawing logical conclusions from the passage.

The test was tried out on a group of thirty students. This group was selected from the population, but outside the participants of the study. The purpose of piloting was to estimate the time needed for completing the instrument. To establish test validity, the researcher consulted a panel of university professors and EFL supervisors to review the test and supply whether items relate to their respective domains, clear, and appropriate to students' level. The reliability of the test was established by administering it to a sample of thirty-eight eleventh graders out of the subjects of the study. K-R, 20 formula was employed for test internal consistency. The test yielded 0.79 on the total, 0.72 on the literal, 0.78 on the inferential, and 0.79 on the critical.

### **Instructional Materials**

The purpose of the technology-based program (website) was to teach students to make prediction about the title of the reading passage, to use contextual cues and text information to verify prediction, to take notes about the reading passage, to generate questions about the reading passage, to identify the main idea in the reading passage, to give a summary of the reading



passage, to develop interpretations or conclusions about the passage that included connections between the passage and their background knowledge or their ideas and beliefs, and to create the inferences that can describe how they understand more about the passage they read.

According to a number of themes emerge from an examination of the existing literature related to the elements of designing a high quality website. The website consisted of the following components: (1) home page: Bailey (2004) pointed out that the homepage is different from all other web site pages. A well-designed homepage should give a good first impression to the website visitors. A homepage should clearly state the site's purpose and its audience. Web site logo and title help reassure the visitors that they have arrived at their intended destination. (2) navigators and search boxes: Beaird (2007) mentioned that a navigator on a web site is a group of links that form the web site navigation menu. Depending on the amount of content on the web site this navigation menu or bar is designed vertically or horizontally near the top of the web-page. Hartland (2011) mentioned that not having a search box on a web site is a key user complaint. If a visitor needs quick access to information, the website must meet their needs. (3) hyperlinks in body text: links are considered one of the main components of the web-page, and it is these related links which make the web site basically different from a traditional text. Additionally, the links are the starting point for deciding the entire structure of any web site (Hall, 1999). (4) secondary pages: Beaird (2007) mentioned that a good web developer should keep content of each secondary page (that is, non-home page) relatively brief. (5) texts: Shotsberger (1997) pointed out that the text presented on a given web page should be limited, and scrolling should be avoided. (6) frequently asked questions (faqs): Rosenberg (2009) mentioned that faqs page has a major block of questions; each question is linked to an answer that can be either on the same web-page or on a new page. To create a faqs page the developer should first, find out the most commonly asked questions. Second, provide accurate and straightforward answers. Finally, group the faqs by question type, and give each group a heading.

This website consisted of six lessons based on cognitive reading strategies. Each lesson concentrated on the direct instruction of one of the cognitive reading strategies. The following are the phases for teaching the reading strategy in each lesson: (1) Preparation; in this phase, an animated talking character (played the role of the teacher) greeted the students and informed them that in this lesson they will learn about the cognitive strategy. Then the students read the definition of the strategy. (2) Presentation; in this phase, the animated character encouraged the students to study an example to learn the steps of this strategy. (3) Practice; in this phase, the animated character asked the students to practice the reading strategy on a text from the current 11th secondary school text book. (Action Pack 11). The students read the text and wrote their sharing in the forum. The teacher read the students' sharing in the forum and commented through the same forum. In this phase, the students also did an exercise in which they chose the best answer for three questions (literal, inferential and critical) to check their comprehension. Students received immediate feedback of their scores and the correct answers. (4) Evaluation; the animated character encouraged the students to evaluate their own success in applying the strategy through a contact box to give their own opinions about the usefulness of the strategy and if it helped them comprehend the text well.

## Teacher training

A qualified teacher of English, with a B.A. in English language, International Computer Driving License (ICDL), and a twelve year experience, implemented the program. She was officially appointed as a teacher of English at Tabaria Secondary School for Girls. She was admitted by the

relevant parties (Ministry of Education and The First Directorate of Education in Irbid) to carry out the experiment for both the experimental, and the control groups.

To ensure intact implementation of the procedures employed in the technology-based program, the teacher was given intensive training. Before the experiment, she was invited to participate in the development of the lesson plans which include objectives, procedures, activities, mechanisms of interaction, and communication tools. She also participated in designing the website where she added her personal touch. She participated in validating the teaching plans, and the instrument of the study. She also helped in administering the students with the reading comprehension skills test. She was told that technology-based instruction could be most effective when the instructor carefully create a comfortable learning atmosphere, interact with the students, follow their activities, motivate and facilitate feedback. A teacher guideline was prepared and added to the website. It contained detailed instructions on how to use a teacher account.

### **Research design and data analysis**

This study used a quasi-experimental design employing one experimental group and one control group. The test was administered twice to the two groups for measuring their reading comprehension skills, one before the treatment began and the other was after the treatment completed. The independent variable was the method of teaching, which had two levels: the technology-based reading strategies instruction and the conventional instruction. Students' performance on the comprehension test was the dependent variable. Means and standard deviations were computed to compare means for the two groups on the pretest and posttest. Multiple Analysis of Covariance (MANCOVA) and One- Way Analysis of Covariance (ANCOVA) using pretest scores as the covariates were performed to detect any significant differences between the two groups on the posttest. All hypotheses were tested at the level of  $\alpha = 0.05$  level.

### **Study procedures**

Two phase of procedures were employed, one before the experiment started and the other related to the arrangements of the experiment. To check on the equivalence of the groups of the study and to determine the appropriate statistical procedure, an equivalent version of the reading comprehension test was administered to both groups of the study before the experiment started. Mean scores on the pretest for both groups were computed. As indicated in Annex 1, the experimental group mean score 6.55 was higher than the control group 6.09 on reading comprehension skills. This meant that subjects in the control method started out the experiment with lesser prior knowledge and performance in reading comprehension skills than their counterparts in the experimental group.

Thus, to determine if this difference was significant at the level of  $\alpha = 0.05$ , T-test was performed. The T-test results showed that there were no significant differences between the control and experimental groups on the pre-test. T. values yielded were 0.98 ; 1.63 ; 0.18 ; 1.90 by Sig. 0.32 ; 0.10 ; 0.85 ; 0.06 respectively. This indicated equivalence between control and experimental groups on the pre-test and that both groups started the experiment with similar knowledge and performance in reading comprehension.

The second round of study procedure began with an intensive literature review followed with the selection of the instructional materials in preparation for inclusion in the website made for the purpose of teaching students reading strategies that help them improve their reading comprehension. Specifically, the reading texts in the units were identified, analyzed and prepared compatible with the technology-based instruction requirements and referred to a panel of judges for further validation. The texts, comprised the reading selection, were found appropriate for the

Jordanian secondary school learners in terms of age, culture, background knowledge, language level ...etc. The technology-based reading strategy instructional program was developed, validated, and piloted as appropriate. Based on the objectives of the technology-based program, the reading comprehension skills test was prepared, drafted, and content-validated. The time for the comprehension test was assigned based on piloting. The consent of the Ministry of Education, and consequently the permission of the First Directorate of Education in Irbid and the school headmistress were obtained for carrying out the experiment in Tabaria Comprehensive School for Girls. The school was purposefully selected on convenient grounds. By coin flip, the two classes of the 11th grade were assigned to the levels of the treatment. The reading comprehension skills test was administered before the experiment started out. The teacher of English was given intensive training on teaching the technology-based program. The teacher was trained on how to develop a series of abilities and strategies that can be divided into: Professional; to know the material, the contents, activities, methods and teaching plan. Technical; basic skills which allow her to carry out her lessons appropriately. Personal; interacting, giving feedback, receptive capacity, initiative, and creativity.

Upon completion of the experiment, the comprehension test was immediately administered. Participants in the two sections were informed in advance on the test date, time, and purpose. Results for the comprehension skills test were tabulated. Means and standard deviations were computed to compare means for the two groups on post administrations of the comprehension test. Multiple Analysis of covariance (MANCOVA), and One-way ANCOVA using pretest scores as the covariates, was performed to detect any significant differences between the two groups on the reading comprehension skills.

## Results

To recall, this study aimed to investigate the effect of a technology-based reading strategy instruction program on the literal, inferential, and critical comprehension of students. To answer the questions of the study, two sections of the 11th grade students of Tabaria Secondary School for Girls in Irbid, were randomly selected. Section A, consisted of 38 students and 41 students were in section B. Section A represented the experimental group while section B served as a control group. For the purpose of this study, students' reading comprehension was measured on the reading comprehension test, including three skills: literal, inferential, and critical. The reading comprehension test was administered on the two groups of the study before the inception of the treatment for detecting any significant differences between the two groups. Both groups started the experiment with the same with similar knowledge and performance in reading comprehension as per the results of the T-test. One Way-Analysis of Covariance and Multiple Analysis of covariance (MANCOVA) were used for detecting any significant differences attributed to the methods of teaching on the post test. Mean scores and standard deviations of both groups on the posttest were tabulated. The experimental group had 12.50 mean with 1.72 SD and the control group had 7.61 mean and 2.02 SD. The results showed that there appeared a difference between the mean scores of the experimental group and the mean scores of the control group on the posttest in favor of the experimental group. To test the significance of this difference between the two groups, the One-way ANCOVA and MANCOVA tests were performed using the pretest scores as the covariate. The results showed that the F values were significant at  $p < 0.05$ . This meant that the students' reading comprehension on the posttest was impacted by the treatment in favor of the experimental group, which was taught by the WBR SIP. In conclusion, the treatment showed that the experimental group- which was taught by the WBR SIP- outperformed the control group- which was taught by the traditional method of teaching - on the reading comprehension test.

## Discussion

Before presenting a potentially noteworthy discussion of the findings obtained by this study, it is important to acknowledge delimitations and limitations of the study, including both internal and external threats to validity. Note that, although the instructional plans received comments and criticisms from a number of experts during validation and piloting, they may have been a threat to internal validity. Other threats that would limit the generalization of the results are: difficulties due to the lack of computer lab headphones and the slow internet connection at the school. In addition to the crowded classrooms in the selected school, and higher qualifications of the experiment's teacher may not reflect the typical educational situation in other parts of the country or the private school settings. The One-way ANCOVA and MANCOVA statistical procedures indicated that the mean score of the experimental group, exposed to the WBR SIP instructional treatment, was significantly higher than that of the control group taught by the traditional method of teaching, on the posttest. This significant improvement was expressed in the subjects' mean scores on the posttest. Students exposed to the WBR SIP model showed a greater interest level in reading comprehension in the eleventh grade students than students exposed to the traditional method to teaching. These results support the findings of (O'Reilly, Sinclair and McNamara, 2004; McNamara, Levinstein and Boonthum, 2007). The technology-based instruction used in these studies had positive effects on reading comprehension skills. This improvement might be due to the fact that the online tasks call for independence in reading and the students found it easy to deal with these tasks because they were online, highly-interactive, and self-paced and self assessed; students learn at their own pace, with freedom to repeat or practice phases instantly. The result of this study was also consistent with the findings of (Bimmel, Bergh and Oostdam, 2001; Lau and Chan, 2007; Karbalaee and Rajyasharee, 2007). The findings of these studies showed that technology-based students interacted with the internet, and so they got involved in such an instructional process that encouraged them to become more actively involved with what they were reading. This also encouraged students to better deal with the reading texts than the usual reading textbooks. The findings also showed that students were able to get to the surface meaning of the reading texts more easily. Their achievement on the literal test indicated that they became more aware of the strategies they were directed through the technology-based instruction and they had the ability to find information and ideas that were explicitly stated in the reading texts. Additionally, this result was consistent with the findings of (Bimmel, Bergh and Oostdam, 2001; O'Reilly, Sinclair and McNamara, 2004; McNamara, Levinstein and Boonthum, 2007; Boulware-Gooden, et. al., 2007; Moghadam, 2010; Sarani and Jabbari, 2010; Fan, 2010) which found that strategy instruction improved students' inferential comprehension and cleared up any misconceptions about the topic. These studies also concluded that this achievement of the experimental group students could be attributed to the student-centered teaching approach that technology-based instruction provides. Every student had a different learning style that worked best for her. Some learned visually or auditory others did better when they "learn by doing". Students could also think longer about what they wanted to say and add their comments when ready. They had a few extra moments before they could press that "Send" key, giving them just enough time to think out their responses. In the conventional class room, the conversation could have gone way past the point where the student wanted to comment. This result was consistent also with the findings of (Bernadowski, 2006; Moghadam, 2010; Fan, 2010; Ponce, Lopez and Labra, 2010) which obtained significant effects on the critical comprehension in favor of the strategy instruction introduced due to the communication tools of technology-based instruction.

## Conclusion and recommendations

There is a demanding need for enhancing students' reading comprehension. However, technology-based chances for independent students are currently far behind meeting this need. Technology-based programs are great effective instructional tools that can enhance students' reading comprehension, and improve their reading skills. Such programs give the teacher the opportunity to design purposeful reading activities which will attract, motivate, stimulate and meet the various needs of students. One should emphasize that technology-based programs are not meant to replace the teacher; it is a technique to overcome traditional classrooms and a way for students to go over their work in an interesting and new way.

Based on the findings, future research is invited to (1) replicate the experiment with different size and different types of learners (e.g. gifted students) and for longer periods of time so that the generalization could become more valid and widely applicable; (2) conduct a similar study investigating the effect of technology-based reading strategies instruction programs on students of other educational stages as the lower basic stage; (3) identify other variables which could improve the level of the students' success in improving their reading comprehension and to determine to what extent those variables may affect this skill

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**Editor' Note:** Teacher education is often slow to adopt innovations; it is also a problem if teacher training programs do work hand-in-hand with schools in testing and adopting new ideas. Even though communication technologies have been adopted widely in business and social spheres, education is limited by limited funding and a need for successful models to follow.

## **Experiences with ICT in pre-primary Education during the student's practical training.**

**Rosalía Romero Tena**  
Spain

### **Abstract.**

Initial training of teachers and in particular learning and experience gained during the internship, are topics of great interest to improve curricula. This paper provides information on what is done in the children's classrooms with ICT. It gives an overview of the knowledge and experience acquired by the students on ICT during the practice period. To obtain this information, a questionnaire, previously validated by expert judgment, was administered to students of the Faculty of Education after completion the practices. Although there was great interest to acquire "in situ" knowledge on how to use ICT in classrooms, little was accomplished in this study because only a few schools work with ICT at the pre-primary level.

**Keywords:** teacher training, ICT, pre-primary education, practical training, teachers' skills.

### **Introduction.**

In a review of studies undertaken on practical ICT training for teaching staff, the correlation between adequate training for teachers and how effectively technology is incorporated becomes evident in a great deal of cases.

A summary of general points from the literature review tells us that these studies make clear, firstly, that equipping trainee teachers with technological skills is essential if this knowledge is to be passed on to future generations, adding a variety of suggestions about how this training can be given in an educational setting. Secondly, there is a great deal of concern for the detection of the factors which, together with the setting, impede the use of technology. Thirdly, it can be argued that there is a close relationship between the use of computers during the teaching practice and the targeted embracing of the ICT being the study on how the perception of students influences the use of technology an interesting aspect to analyse.

The study presented in this paper can contribute to all this research by providing information on another factor which may affect the use of technology in the classroom i.e. the experience gained during teaching practice at school and how the incorporation of ICT into pre-primary classrooms learning can take advantage of it.

Some interesting findings have emerged from the data in studies undertaken in the Spanish context (Cabrero et al., 1994; Ortega et al, 1997, Romero, 2006, 2009). For instance, the fact that new teachers involved in nursery and primary levels show a persistent tendency to avoid the use of ICT, using traditional teaching material instead. They also highlight the fact that the tutors assigned to the students in the schools where they undertake their teaching practice are not adequate role models, and the students do not have the practical information to visualize the adequate implementation of this media within the classroom.

Studies carried out in other countries, such as the one by Franklin (2005), provide sufficient information to convince us that the training teachers undergo influences their later use of technology in teaching. Becker's study (2000) also shows us that the teachers who are most committed to working with computers are those with a constructivist teaching background, but

this study does not make clear how this background has influenced their classroom practice or to what extent.

Niederhauser & Stoddart (2000) examine the relationship between the teacher's own views on education and the use of technology in teaching. The aim of this study was to examine the relationship between teachers' views on the use of computers effectiveness in teaching and the types of software they use. The results of this study show that teachers' views are related to the types of software they use with their pupils.

Spaulding (2007) also carried out statistical research in which he tested future and practising teachers on their knowledge of computers and their own perception of their skills. The results of the Assessment of Technology Skills showed that trainee teachers scored higher marks in both their knowledge of the skills and their incorporation of these skills into the classroom. Also found that trainee teachers were more willing to incorporate technology. Spaulding's research (2007) showed that there is a direct correlation between the level of skills teachers consider themselves to have and their perception of their ability to incorporate technology effectively into the classroom. Although the perceptions of practising teachers were much lower than trainee teachers, and more than half responded, to a previous questionnaire, that they routinely used a computer in their teaching, this conflicts with the data from the research. These teachers continue to express less positive feelings about incorporating computers than trainee teachers. Spaulding's study discovered that a technology training programme for teachers leads to more positive attitudes towards the use of technology in the classroom. However, it highlights the need for a follow-on study to determine the actual extent to which trainee teachers incorporate technology when they begin their teaching career.

Kumpalainen (2007) raised concerns about the ICT skills of both trainee teachers and teacher trainers, and the need to update their knowledge of technology. This study began by researching university level teacher trainers for (a) their perceived skills (b) their interests and (c) their attitudes towards the use of information and communication technology. The questionnaire was given to his education staff, including teachers and lecturers at the University of Oulu, Finland. The findings provide evidence that computer skills among the teacher trainers vary considerably according to their age and gender and, consequently, suggest a certain impact in the use of technology in education, the training of personnel or the activities of educators in general.

Finally, Karpatil (2008) points out that personality traits can be associated with the success or failure of becoming sufficiently proficient in ICT use in education. The strong correlation between certain personal characteristics in the success of ICT usage seems to suggest that the incorporation of digital teaching material and its methodology can be affected by individuals themselves, whether it involves teaching professionals and staff in the context of a specific teaching environment, course content, methods or tutors. His ICT courses are therefore designed to suit not only the starting levels of technological knowledge, but also the mentality of the teachers.

## Methodology

Taking into account the above exposed background, the objective of the study focused on how the experience acquired by the students during practice training provides knowledge on ICT as well as the way to integrate it in pre-primary classroom.

A questionnaire was prepared as the best way to undertake it. In order to validate the first draft of the questionnaire, it was sent to a number of experts; ICT and pre-primary education professionals. They made a number of modifications that were incorporated to create the final version, which was the one we gave to the students. The questionnaire was set out in five large sections containing questions on the school, the pre-primary teaching staff, the pre-primary

classroom, ICT in the pre-primary classroom and experiences with ICT in the classroom. The first and second sections were prepared in closed format questions, while the rest were designed as open format. For the content analysis of the open questions a category system was developed, to grouped the answer.

The respondents were in their second and third years of studying to be pre-primary teachers, total of 230 (N=230) students responded to the questionnaire, 129 were second year students, 101 were third years.

## Results

Relevant information about schools, centres and teachers related to the practice period were as follows: most of the schools where they spent their teaching practice were state schools (70%) in urban settings (76.1%); 90% of these schools provided pre-primary and primary education.

The teaching staff responsible for the practical training of the students (Practice Tutor) was 80% female (12% men, 7.4% unknown) and 78% were qualified pre-primary teachers (11.7% university graduates, 2.2% other).

An important aspect on pre-primary was included in the questionnaire to determine how space and time are organised in the pre-primary classrooms, what type of methodology they use and which resources are used more often than others.

The responses received gave a clear picture of the general context in which nursery education is carried out; the vast majority of *classrooms work by corners* (83%). In some of them, this is the only methodology used, whereas in others they are combined with other strategies and methods. It appears, moreover, that this is closely linked to the distribution of the class and how the pupils are grouped. Finally, we should note that there is a wide variety of methodology, although most of it fits into what could be described as corners. Some examples are detailed below:

*"The space is organised in corners (computer corner, art corner, library corner, maths corner, construction corner, symbols corner)" (C.1-Corner)*

*"They are organised in corners: construction corner, letters corner, dressing up corner, hairdressing, kitchen and computer corners." (C.2-Corner)*

*"In activity corners and in groups divided into five work tables." (C.33-Corner+tabl)*

*"When the whole class comes together, there are four tables: two larger ones which take more children, a blue table and a red table. Corners and workshops." (C.78-Corner+workshop)*

*"A number of corners for games, stories and other things. A large space with round tables." (C.101-Corner+tabl)*

The most commonly *used strategy* revolves around routines, projects, play, etc. (89%) which establishes work patterns such as the ones illustrated in the examples below:

*"Through routines: class time, explaining topics, exercises, games in corners, breakfast, break, explaining other worksheets, psychomotor skills, etc." (C.33-Met)*

*"Following a routine based on play. Class time/ worksheets/breakfast/games/music." (C.73-Met)*

*"Class time – working independently – breakfast – break – class time – working independently. Wherever possible, this is the routine we followed." (C.40-Met)*

*They were organised in different corners. Every day, the children would choose which one they wanted to work/play in. They're not allowed to choose the same corner every day." (C.48-Met)*

*"The first hour is class time, then working in corners, good hygiene, breakfast, class time, working in corners and home time." (C.80-Met)*

Once the most important aspects about the way of teaching and classroom physical distribution, were set, we studied the role of ICT. First we looked into whether or not they had computers in the classrooms and then how they used them. 53% answered that their classroom had a computer, whereas 45.2% said they did not. This means that out of 122 students who said they had a computer in their pre-primary classroom, 57 of them had one

The answers to the question *What are they used for* were listed by importance: for watching films or videos (images, photos, etc.) on the topic they had been working on, for playing, for learning to operate the mouse or the keyboard, for reinforcing content, as another work corner, and finally – or solely – for the use of the teachers. Examples of these uses are given below:

**Videos/films (image viewing):**

*“It’s only used for showing stories in the units, or for films or listening to music. For the last two, the cinema and the radio were also used.” (C26-Film)*

**Play:**

*“There was a quadrant where they sat down to use the computer L, M, X, J, and V. The teacher would choose the pupils and they would use the computer as a reward.” (C.97- Game)*

**Operating the computer and its accessories:**

*“They use it for working on an activity. The children operate the mouse and familiarise themselves with it, and they write their name using the keyboard and see it come up on the screen.” (C.32-Infor operat)*

**General concepts:**

*“The computer is used so that the children can see things connected with the theme they’ve been working on, but the children don’t operate the computer; the teacher does that.” (C.20-Concep)*

**Activity corner:**

*“It’s used in one of the corners (the library corner) where the pupils work with software on basic subjects designed for nurseries.” (C.39-Rinc)*

**For the teacher’s own use:**

*“The computer is only used by the teacher, but I never saw her using it. Someone who did use it was a person the teacher brought into the class who played songs for dancing, cartoon series, etc.” (C.83-Use Teacher)*

For the section Experience of ICT in the nursery classroom, perhaps the answer which gives us a general image of what tends to happen with technology in classrooms at this level is: *“I haven’t seen ICT used in the nursery classroom.”* The answer to this question was split almost 50:50. 47% responded that they had not seen ICT in the nursery, while 49.1% responded that they had. Some of the most relevant examples are detailed below:

*“I really haven’t seen an ICT or computer room in a nursery classroom, and if the school where I did my teaching practice knows anything about computers, it’s because once a week the teacher shows them images of things they haven’t seen, or because they use videoconferences.” (C.88-No see)*

*“I’ve seen ICT in the classroom but it was not used correctly. They mostly used it to watch films. They rarely used the computer for working.” (C.93-See+use)*

*“... my tutor wanted to use new technologies but the school would not provide the resources she needed. She brought her own computer to class, but it was too old and didn’t work.” (C.59-See+resource)*

*“I have a negative impression, because I believe that using computers every day in class would have a very negative influence on teaching.” (C.55-See+percep neg)*

*“On the one hand I think this is a good thing, because I don’t agree with such young children using computers. However, on the other hand I think it’s a bad thing because in the world we live in, where*

*computers are part of daily life, it's a step backwards to prevent a child from using computers."* (C.46-See+percep neg)

As we can see from the data and from the impressions given by the future teachers, their teaching practice in schools is not where they gain their experience of the real use of ICT, as almost half of them saw nothing in the schools where they did their teaching practice. We can go so far as to say that the majority of their comments are critical about the use of ICT and the lack of resource, they themselves even have a negative attitude towards using computers at the nursery stage.

In the face of these sometimes negative or reticent impressions about the use of ICT in the classroom, it will be useful for us to take a look at their responses to the statement: *"I do not consider it a relevant part of my teaching practice"*. In this case, 67% of the sample considered it to be an important aspect of their training, as shown in the following extracts from the responses:

*"I consider it very important because future generations are immersed (as I myself am) in a society where new technology forms part of a child's daily life."* (C.82- YES relev formation)

*"I do not consider a computer to be an important element in a child's education. It may be something they could use as an aid."* (C.88-NO relev formation)

To find out a little about the experience they had had, we gave them another set of questions. To the first of these: *"Do you have the knowledge to be able to use ICT in the classroom?"* 60.4% (f=139) said they did. To the question *"Have you seen any use(s) of ICT in the classroom?"* 64.3% (f=148) replied "no" and 59.6% (f=137) answered "no" to the question: *"Have you seen any use(s) of ICT outside the classroom?"*

We asked those who had answered *yes* to any of these questions to give more details about what they had observed or carried out. Their responses could be set in three main categories i) those who had used the computer in classroom ii) those who had only been able to observe how computers were used in the classroom and iii) those who wished to give their comments despite having had no experience of it. The examples below give us an idea of these responses:

#### **Use:**

*"I produced the activity myself with my laptop and the program JClic. I put together a unit for my teaching practice using JClic, connected with the unit we were working on in class." During my work in secondary education, I took part in the last EDUCARED e-conference via the website ([www.plasticarboleda.es](http://www.plasticarboleda.es))".* (C.101-Use+desig)

#### **Design:**

*"In the Faculty, I designed a program with JClic based on the four seasons of the year (for 5 year-olds) and I used it in class to reinforce the things they had been learning."* (C.100-Desig)

#### **Observation:**

*"I observed pupils playing with interactive CD-ROMs where they worked with activities adapted to their age-group."* (C.93-Observ)

#### **No experience of it:**

*"During last year's teaching practice (primary) computers were used as it's an ICT-oriented school. They were used particularly in reinforcing and revising things the children had already learned. This year I have not used computers in class, and we did not actually have a computer in the class."* (C.85-No exp)

Since the most used methodology in classrooms was "the corners", and given that this was one of the aims of the study, we asked them, *"Do you know what a computer corner is?"* Their responses were as follows: 59.6% said yes, they did know, 36.5% said they did not know and 3.9% did not answer the question.

From these responses, we asked those who had answered yes to give us more details about what they knew about it. We tried to obtain information about how they arranged their curriculum planning, class distributions, time and space management, which software they used, etc.

**Training within the Faculty:**

*"I have had no experience of it, but for some work I did within the Faculty we made a teaching unit for nursery where we designed different corners, and one of these was a computer corner for which we produced activities for learning numbers, differentiating colours, etc. The children were divided into groups of five and the computer had a microphone and headphones for children who had difficulty seeing or writing." (C.13-Form faculty)*

**Curriculum planning:**

*"This corner was used by a group of six pupils per day whose turn it was to use the corner, as the groups took turns with it. There was no type of planning for the corner and the pupils played on their own with CD-ROMs produced by the SM Group." (C.34-No plan)*

**Free time (time not filled with activities):**

*"The computer corner only had one computer for the use of three pupils at a time. The computer was used when they had finished an activity. The computer was at a table with three chairs." (C.17-Plan+free)*

**Play**

*"There was no curriculum planning. The computers were only used at corner time and there was one for every two pupils. The resources used were games." (C.18-Plan+game)*

**Giving information:**

*"The children do not use the computer; they only watch the screen when they are being taught something." (C.40-Inform)*

**Class distribution (pupils-space-time):**

*"The computer corner is the space reserved for activities connected with learning about technology for nursery age children. They use resources such as educational computer programs in this corner to give the children a start with computers." (C.131-Distr A/E/T)*

**Software:**

*"At playtime the children choose corners, and one of these is the computer corner. There is one computer per child, and the games are educational, such as "My First Words", etc." (C.60-Soft)*

*"The computer corner is the space reserved for activities connected with learning about technology for nursery age children. In this corner, they use resources such as educational computer programs to give the children a start with computers." (C.113-Soft)*

*"They put a CD-ROM on for them and they play games against each other." (C.25-Soft)*

The ideas which emerge from all these comments about the "computer corner" are that, firstly, there does not appear to be any clear planning for it within the curriculum. The corner has more use in play than in learning, and even if learning is implicit in the games, it is not properly incorporated into aims or content at curricular level. All the children in the classroom use it, and the most widely-used system of organisation is that groups take turns depending on the number of computers (pupil-computer ratio) and the amount of time dedicated to classroom corners.

The software used is more varied but they focus largely on generic interactive games from publishers, or JClic activities created by others or by students themselves. They use the MS Office package for creating presentations or other types of material, and they use applications like Paint, YouTube for watching videos and educational market software such as "Reader Rabbit" ("El Conejo lector") Pipo, the internet, etc.

## Conclusions

As we have seen throughout the study, one of the major constraints for ICT training in the period of practice, is the available equipment of classrooms. Half of the classrooms where they did their teaching practice had no computers, so these students had no “real” experience of using technology in pre-primary classrooms. Where there were computers, they were mostly used for playing, watching films and for reinforcing education content.

The responses to the questionnaire provide evidence of working in corners in nursery classrooms, a methodological decision consistent with the management of time and space associated with this strategy. Therefore the implementation of ICT has to be incorporated in this teaching process so that it becomes one of the routines (class time-classwork; working independently-psycho-motor skills; corner time-class time).

In terms of our interest in finding out about “the computer corner” and how it is used to incorporate ICT into classrooms, we have seen that less than half the students have any knowledge of this corner. Their knowledge of it comes mostly from having studied it at university and not through having seen it in the classrooms where they did their teaching practice. Most of them said that it was used during “free time”, in “play” and/or for the teacher to “explain something” to the children. The pupils tend to take turns in this corner, and the programs (software) they use tend to be generic CD-ROMs produced by publishers as a teaching aid.

The ultimate finding is that students would very much like learn how to use computers in the pre-primary classroom, but the fact is they have no knowledge of how to make use of ICT by the end of this component in their training because they have seen little use of them in practice.

We support the findings of the previous studies carried out by Spaulding (2007), Kumpulainen (2007), Koster, Kuiper et Volman, (2012) adding the study on technology training for student teachers and its influence upon the use of technology in the classroom conducted by Spiegel (2002). In the light of these results, Spiegel proposes questions for future research, such as finding a way to reduce the gap between what can be done with technology in the classroom and what ought to be done. He also suggests looking for ways to provide adequate training for both future and more experienced teachers, together with the time to prepare lessons in which the use of technology turns out to be effective.

Also Ihmeideh (2011) highlight that although student teachers acknowledge the role of ICT in kindergarten children’s development, most of them do not use ICT in their teaching practices. Findings revealed that the inadequate equipment was found to be the main reasons for not using ICT. Moreover, student teachers mentioned that the cooperative teachers do not pay attention to computer center in the classrooms nor they encourage them to use ICT in their actual practices.

## Implications

Teaching practice in schools is critical in consolidating the theoretical base of teacher training, as well as for acquiring practical experience of teaching. It is a time when everything that students learn is put into practice, but if it does not fulfill the aims of teaching practice it has not been successful. The schools which are selected, on the one hand, and the teaching staff on the other, are the focal point on which this training is founded. If they do not offer the experience required by a future teacher, some of the selection criteria for participating schools need to be revised. Indeed, they should be chosen in a carefully considered and responsible way. It is a question of fulfilling the objectives set out for teaching practice. This study has revealed, amongst other things, a lack of provision for ICT in the classrooms selected for teaching practice. As there was no computer in half of them, we can assume that half the students were unable to have any experience of incorporating ICT.

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