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Web 2.0 Tools Incorporation in Vocational High Schools in Costa Rica: An Exploratory Research Study

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Dedicatoria

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Resumen

Este estudio exploratorio tiene por objetivo identificar las herramientas Web 2.0 que los(as) docentes de 21 colegios vocacionales de Costa Rica han utilizado, así como determinar la percepción de los profesores(as) en relación con el uso de estos recursos tecnológicos en la enseñanza del inglés como lengua extranjera. Para obtener sus opiniones, 55 participantes completaron dos encuestas auto-administradas en línea. Los autores usaron un proceso de codificación y estadísticas para analizar la información obtenida. Los hallazgos indican que la mayoría de los educadores utilizaban las redes sociales y Google Sites, pero no lo hacían primordialmente con propósitos didácticos. Asimismo, a la mayoría de los profesores les gustaría utilizar algunas otras herramientas Web 2.0 tales como wikis, Voki, Google Drive porque perciben que estas aplicaciones (1) son atractivas e interesantes para los estudiantes, y (2) mejoran tanto la exposición de los estudiantes a la lengua meta como la producción de los estudiantes en inglés. Adicionalmente, los factores relacionados con el tiempo disponible, la capacitación y los recursos existentes han impedido que los participantes utilicen las herramientas Web 2.0. Palabras clave: Herramientas Web 2.0, enseñanza del inglés, colegios vocacionales de Costa Rica, percepción de los docentes.

Abstract

The purpose of this exploratory research is to identify what Web 2.0 tools teachers have used in 21 Costa Rican public vocational high schools as well as to determine the instructors' perceptions in relation to the use of these technological resources in the teaching of English as a second language. In order to know those opinions, 55 participants had to fill out two online self-administered surveys. Authors drew on a coding process and statistics to analyze data obtained. The results indicate that most teachers used social networks and Google Sites, but not primarily for didactic purposes. At the same time, the majority of teachers would like to try some other Web 2.0 tools such as wikis, Voki, Google Drive because they perceive that these applications (1) are appealing and interesting to students, and (2) improve both students' exposure to the target language and students' production in English. Additionally, factors that deal with time, training, and resources available have refrained participants from applying Web 2.0 tools.

Key words: Web 2.0 tools, teaching English, Vocational high school, teachers' perception.

Chapter I

Introduction

Background of the study

The development of Information Technology (IT) has revolutionized the way people communicate in the past few years. In fact, today's Web 2.0 tools have brought innovative ways of sharing ideas and thoughts, particularly among adolescents, who are the type of user more prone to incorporate new technology in daily life activities (Cuevas Cordero & Alvarez Vargas, 2009). For instance, most teenagers keep in touch with their peers through social networking sites, instant messaging services, and email. In a study about blog users in Costa Rica, Solano Cordoba (2010) remarks that there are even young people that regularly have contact with people from other countries who speak different languages, which in turn might be quite beneficial for those youngsters in learning a foreign language.

Nevertheless, the widespread use of the Internet as a means of communication and entertainment does not seem to go hand in hand with its adaptation for pedagogical purposes in the Costa Rican public secondary education. As a matter of fact, several studies show that the Internet has not been used extensively in Costa Rican public high schools. For instance, in a study about places where young people used the Internet more often in the past six months, Cuevas Cordero and Álvarez Vargas (2009) acknowledged that for Costa Rican secondary students their school had no relevance. Similarly, another study revealed that secondary students have been more often encouraged to use and learn about information technologies at home than at school (Society Program of the University of Costa Rica PROSIC, 2008).

In like manner, an article published in one of the most popular Costa Rican newspapers remarked that, although most teachers have a computer with Internet access at home and use it for personal matters, they do not use these technological resources at school. Commenting on that situation, the article added, "This occurs in elementary and secondary public school classrooms all over the country, limiting the scope of these technologies and questioning the effectiveness of the training when implementing these resources at school" (Ross, 2015, p.11A, our translation).

Certainly, the Internet is not widely used in Costa Rican public secondary schools. Hence, the potential benefits of Web 2.0 applications as a learning tool are commonly unknown in those settings. To illustrate, a survey conducted by the Population Studies Institute of the National University (UNA) showed that only 14.9% of the sample population (ages 15-25) had used a blog, as cited in Solano Cordoba, 2010.

Several authors point out the benefits that students have derived from using Web 2.0 applications as communication and learning tools in different countries and at different education levels (Richardson, 2010; Tingen, Philbeck, & Holcomb, 2011; Rosen & Nelson, 2008; Lee, 2009). However, there is little research about this topic in the Costa Rican context, there are just a few studies carried out particularly with higher education students. Public secondary education is still an unexplored setting to evaluate the impact of the systematic implementation of Web 2.0 tools to learn English as a foreign language.

Justification

Currently, both the University of Costa Rica (UCR) and the Ministry of Education of Costa Rica (MEP) have promoted the implementation of technological tools that can help educators during the teaching process; those tools emphasize the need for changing the way students perceive their lessons so that those lessons become more attractive and significant. For instance, students at the Licenciatura program for teaching English at UCR are required to take the course "Tecnología Educativa Aplicada a la Enseñanza de la Lengua Extranjera" (Educational Technology for Foreign Language Teaching), which encourages teachers to innovate practices and environments for the language learning/teaching process. In 2013, MEP launched a training program on web-based tools through the Technological Resources Production and Management Department (GESPRO). This program aimed at training vocational high school teachers on how to use digital tools to make classes more dynamic so that students take advantage of English-learning Internet applications.

The purpose of this study is to identify what Web 2.0 tools have been used by English teachers in public vocational high schools as well as to determine their perceptions regarding the potentialities of these technological resources in teaching English as a second language. Since there is no study in this specific realm of public education, we seek to contribute to build a better comprehension of the subject by finding out specific data. Moreover, by carrying out this research study, we aim at identifying factors that might prevent teachers from incorporating these technological resources in their schools.

Research question

The guiding research question of this study is:

What are the teachers' perceptions toward the potentialities of Web 2.0 tools in the EFL class? To answer this question, several sub questions are addressed:

- 1. What specific Web 2.0 tools do public vocational high school teachers use to teach English?
- 2. What benefits do public vocational high school teachers perceive Web 2.0 tools have on teaching English as a foreign language?
- 3. What factors do public vocational high school teachers consider interfere with the implementation of Web 2.0 tools in their classes?

Definition of Terms

For the aim of this study, it is important to define the following terms:

- Audacity: It is a free application that lets users to record and edit digital audios.
- Audio/Video Casting (Podcast): Online resources that allow users to make digital voice and video files. They can be easily published and distributed on the Internet. With these tools, "students can now easily 'write' in many different media, a fact that opens up all sorts of possibilities for the classroom. They can also begin to create live streaming TV online (Richardson, 2010).
- Cuadernia: This is an online application used to create complete learning units in the form of digital notebooks. These can contain information such as images, text, video, sounds, even multimedia activities.
- Google Drive: This is a free data storage service where users can keep files that can be edited by multiple users at the same time.

- Google Sites: An online free application where people can create websites. Users can include different contents like videos, texts, audios, and presentations. Information can be shared easily and rapidly through the Internet.
- Exploratory mixed methods design: It consists of first, gathering qualitative data to explore a phenomenon, and then collecting quantitative data to test relationships found in the qualitative data (Creswell, 2008).
- Screencasts: These online tools let users capture the actions that occur in the computer screen. Audio narrations can be included.
- Social networking sites: Social networking sites are Web 2.0 based tools that allow users share a lot of private information including photos and personal details. Users get to know a lot about the private lives of others. Examples of these sites are Facebook.com and My Space.com (Shihab, 2008).
- Survey Monkey: This tool lets users create free online surveys with multiple formats and applications.
- Qualitative data: It consists of opened-ended information that the researcher gathers through interviews with participants (Creswell, 2008).
- Quantitative data: It includes closed-ended information such as that found on attitude, behavior, or performance instruments (Creswell, 2008).
- Weblogs: A weblog or blog is an easily created, easily updatable Web site that allows an author (or authors) to publish instantly to the Internet from any Internet connection. They can also be interactive, allowing teachers and students to

begin conversations or add to the information published there (Richardson, 2010).

- Web 2.0: A new concept in web programming which "has allowed millions of users to easily publish their files and ideas and collaborate with an audience that spans the globe." (Shihab, 2008)
- Wiki: According to Richardson, (2010) a Wiki is a collaborative Web space where anyone can add content and anyone can edit content that has already been published. In schools, teachers and students have begun using passwords-protected wikis to create their own textbooks and resources sites.
- You Tube video clips: They are current popular technological products that *bring many funny, creative, interesting, or unbelievable short video clips to people's attention worldwide. Such depictions, available to anyone who has Internet access, also shorten global distances." (Kou, 2009)
- Voki: An educational online tool that allows users to create their very own talking character or avatar.
- Voxopop: A Web application program that can be used to create forums or "talkgroups" where users can record their real voices.
- Voicethread: A web-based digital-storytelling application that allows users to share their stories through text, audio, images or videos.

General objective

To determine the perceptions of the use of Web 2.0 tools among EFL teachers in public vocational high schools of Costa Rica in order to establish the potentialities of these resources in teaching English as a second language as well as factors that might interfere with the application of these technologies.

Specific Objectives

- . To find out reasons why teachers have used Web 2.0 tools in EFL instruction in vocational high schools and the association of these reasons with the perception of educators towards these Internet applications.
- · To establish whether the perceived potentialities of Web 2.0 tools could encourage teachers to incorporate these technologies in their English classes.
- · To determine factors that might prevent teachers from incorporating Web 2.0 tools in EFL instruction.

Chapter II

Theoretical Framework

The following literature review presents research related to the potential benefits of incorporating Web 2.0 technologies in learning processes as well as some challenges that teachers may face when using these technologies in the classroom. Additionally, specific results of implementing these technologies in the context of teaching a foreign language are discussed.

Teaching English has been a challenge for educators because they have had to focus not only on the varied language skills but also on fostering students' motivation to significantly learn the language. Therefore, it has been necessary that teachers explore the possibilities of implementing the use of techniques and tools that make students feel motivated during the language skills acquisition process. For that reason, the incorporation of Web 2.0 tools in class is one of the key elements teachers have used to improve motivation. According to Ertmer et al (2011), these Internet resources are an effective way to "both 'energize' and 'modernize' existing teaching and learning activities." In like manner, Richardson (2010) categorizes blogs, wikis and audio/video casting as samples of Web 2.0 tools that have the potential of enhancing students' learning.

In regard to blogs, Stephen Downes (2004) remarks that these online resources certainly encourage students to write. In fact, students are highly suitable to organize class discussions where all participants are given equal opportunities to voice their written opinion, no matter how active or passive they are when participating in oral discussions in class. In the same way, Hanewald and White (2008) refer to the functionality of blogs as platforms for other Web 2.0 applications such as podcasts and videos.

O'Bannon and Britt (2012) point at how wikis make collaborative work online simple, allowing students to focus on the learning task rather than on technological concerns. Furthermore, several authors have acknowledged that these Internet resources "have the potential to convert learning environments from traditional knowledge transmission models into knowledge-transformative ones, where students generate, share, and reshape knowledge." (As cited in Ertmer et al, 2011) This functionality of wikis well illustrate a main feature of Web 2.0 tools: they all

facilitate knowledge sharing and knowledge construction. Thus Web 2.0 tools support learning approaches from the social constructivist paradigm. As Rosen (2008) states,

Constructivist pedagogy focuses on students constructing knowledge. From a social constructivist (and constructionist) perspective, this construction occurs primarily through social interactions (Berger & Luckmann, 1966; Vygotsky, 1978; Wertsch, 1986). Web 2.0 collaborative technologies promote social interaction. They allow students' work to be read and commented on by a larger participant audience than afforded in traditional constructivist education. Using collaborative technologies, students can communicate with classmates as well as with others around the world. Comments made by this diverse, participatory audience often generate discussions that enhance learning. (pp. 221)

At the same time, although writing is the most common skill that wikis contribute to develop, these online applications could benefit students in other ways. For example, Woo et al. (2012) describe the positive perceptions that an elementary class derived from the use of wikis in a Hong Kong Chinese primary school. They not only enjoyed using this tool but also found it helpful to improve their performance in the writing skill and group work. Moreover, among the eight groups studied in the class, those that spent more time working on wikis tended to produce higher writing scores (p. 52). Likewise, a quasi-experimental study conducted by Heafner and Friedman

(2008) demonstrated that a group of students who used wikis in their Social Studies class had greater content retention and understanding than their peers who studied the same content but did not use wikis as part of their instructional process. This finding suggests that wikis have the potential of fostering long-term content retention.

In the specific realm of foreign language, a couple of studies reveal important insights about Web 2.0 technologies' use. Huang and Lin (2011) conducted a study to analyze students' perceptions of web-based tools in Chinese foreign language learning. They found that participants responded positively to the use of blogs for supplementary writing. Additionally, wikis offered students additional opportunities for oral practice as well as for developing metalinguistic awareness. Similarly, students acknowledged that their writing skills as well as their collaborative skills were fostered by means of wikis. On the other hand, Tilfarlioglu (2011) expounds on how Web 2.0 tools enable a variety of collaboration, communication and interaction in learning English as a foreign language. Moreover, the use of these technologies contributes to foster learners' writing skills and their motivation.

Additionally, teachers can use audios to teach reading skills and implement a different way of encouraging students to practice reading. For instance, a study conducted by Johns Hopkins University and Recording for the Blind & Dyslexic (2003) found that students who used digitally recorded textbooks performed better on tests measuring content acquisition. In this study, nearly 100 special education students in seven Baltimore County public high schools participated in an 8-week study. Audio books also capture children's imagination, helping them make meaning from words and connect words to the text. Therefore, students can practice reading skills when they access interactive web pages that can be posted on a blog or in a web page created by the teacher.

Furthermore, Web 2.0 tools can be combined with other multimedia applications and Internet web sites that offer a variety of videos and audio tracks available for easy access to practice listening and speaking skills inside and outside the classroom. One of those websites is You Tube, whose video sharing among people has made it one of the most significant places to find material that can help students in their language learning process. A study conducted by Kuo (2009) demonstrated that Taiwanese EFL learners who used You Tube video clips to study English improved their ability to perform well in English listening comprehension. Thus, students have the opportunity to see how to pronounce difficult or unknown words as well as to check pronunciation rules that contribute to build their self-confidence when they have to speak.

On the other hand, in addition to the potential benefits of Web 2.0 tools, several authors also address some challenges that should be considered. For example, O'Bannon and Britt (2012) report on students' discomfort when using wikis for editing the work of others and a higher level of participation from students when publishing rather than when editing. Similarly, in a case study on the use of wikis conducted by Grant, no collaborative work was witnessed although students did enjoy publishing their work (As cited in Capo and Orellana, 2011).

In order to enhance collaborative work by means of wikis, McPherson (2006) addresses the need for teachers' guidance. They must provide students with rules for working collaboratively before they start working on wikis. He adds that "topics for discussion include when and how to edit (e.g. spelling, grammar, formatting), appropriate and inappropriate writing, differences in constructive and destructive feedback" (As cited in O'Bannon and Britt 2012). Likewise, Stephen Downes (2004) reports on triggering students' interest through reading, speaking and listening so that they become engaged with a topic and blog about it.

In summary, the literature consulted shows that Web 2.0 tools such as blogs, wikis, vokis and podcasts could be implemented in the English class to motivate students to learn the language interactively. Nevertheless, most studies deal with higher-education contexts and other academic subjects than English. No study was found about Costa Rican secondary schools. Therefore, there is an opportunity to investigate on a topic that calls our attention because of the relevance that the findings may have in our daily work. Moreover, this work might lay the foundation for further research on this particular issue.

Chapter III

Methodological Framework

This study followed an exploratory sequential mixed methods design for data collection and analysis with the purpose of examining the teachers' perceptions regarding the use of Web 2.0 tools in the EFL class in vocational high schools of Costa Rica. This two-phase sequential design required collecting qualitative data first and then generalizing findings to a larger sample using both qualitative and quantitative methods.

The idea of using an exploratory mixed methods design is to compare results through two different forms of collecting information (quantitative and qualitative): this way of gathering data brings greater insight into the problem than using just one method in isolation. Moreover, since there is not a guiding framework nor variables identified regarding the research problems, this method suits the investigation better.

Investigation Design

1. Settings

This investigation took place in 21 Costa Rican vocational public high schools located in the provinces of San José, Heredia, Alajuela and Cartago (See the list in Appendix A). This type of high school offers academic instruction as well as technical professional training in areas such as Accounting, Information Technology Support, Secretarial Management, and Tourism among others. Vocational education aims at forming technically qualified students who can be able to work at different settings according to the current needs of the Costa Rican labor market.

During the first phase of the research study, data was gathered from eight different high schools in San José. Then thirteen new institutions from San José. Alajuela, Heredia and Cartago were included during the second phase, in addition to four schools that researchers had previously considered in stage one.

2. Participants

The researchers used convenience sampling for both the first and second phase of the study, and a total of 55 vocational high school English teachers who are actively working submitted their responses online. Forty-nine teachers (90% of the sample) had taken part in a training program on web-based tools sponsored by the Technological Resources Production and Management Department (GESPRO) of the Costa Rican Ministry of Education (MEP) in 2013.

Twenty-two English teachers from eight different vocational high schools in San José were interviewed during the first phase. According to the information provided, 12 teachers (54%) are 35 years old or younger, and 16 (73%) hold a Master degree in TESOL. This first group of interviewees was made up by 7 men and 15 women, and they all have a computer with Internet access at home.

For the second phase of the study, a different sample of 33 teachers (9 men and 24 women) fulfilled a new online self-administered survey. From the thirty-three teachers, 25 (76%) are 35 years old or younger and are postgraduates in TESOL. Similar to the first group, these participants have a computer at home with Internet access available. It is worth to mention that this demographic information about participants is just informative; researchers did not use any demographic variable to correlate in this study.

3. Procedures

In the first phase of the study, thirty-one teachers were sent an invitation to complete an online self-administered survey hosted in Google Docs. The survey was available for a month. This online instrument, designed by the researchers, included eleven open-ended questions and six close-ended questions (See Appendix B). The instrument was aimed at obtaining qualitative data about teachers' perceptions of implementing web 2.0 tools in their English classes and their personal experiences about the topic. Since perception is a subject that deals with the subjective ideas of participants, researchers decided to use Spanish in the survey so that interviewees could openly express their thoughts through their native language.

The survey was divided into four parts. The first part included four questions about the participants' profile (gender, age, job category according to MEP parameters. and workplace). The second part of the survey had two specific questions about the way participants generally use computers.

Next, in the third part of the interview teachers watched a one-minute video that describes five different Web 2.0 tools: Cuadernia, Blogger, Google Drive, Google Sites, and social networks. Then they had to mention which of these tools they had used in class, the reasons for employing them, and finally how they implemented the tools in class. After answering all the questions about the one-minute video, teachers had to respond to the same questions but now based on a new video - one a little longer (2.30 minutes) - that described eight additional Web 2.0 tools (Survey Monkey, wikis, Voki, VoiceThread, Voxopop, Audacity, WebQuest, and screencasts).

The last part of the survey included five specific questions regarding teachers' perceptions of Web 2.0 tools. The questions were (a) How do you think the use of Web 2.0 tools could change students' attitude towards ESL learning?; (b) What factors do you think could influence educators to not use Web 2.0 tools in the classroom?; (c) Have you been affected by any of these factors? if so, how have you been affected?; (d) How can English teachers be motivated to use Web 2.0 tools in class?: (e) How important would it be to use Web 2.0 tools in your classes?

Following the research method, this first instrument went through a process of piloting and validation. The very first survey was carried out via Skype. Due to the fact that some questions were not clearly understood and some technical problems came up while having the interview, researchers designed a new version: a self-administered online survey. Nevertheless, after testing it, researchers found out that filling out this survey would take a long time and too much reading, which in turn might discourage participants' willingness. For this reason, an improved version of the online survey was implemented. Two videos were included so that the experience could become more interactive and appealing. This new version of the instrument was tested with two more participants and revised one more time. Finally, it was validated by one MEP supervisor and the research project tutor.

Afterwards, using the information obtained with the first instrument, researchers identified some propositions that would be tested with a new quantitatively-oriented instrument in the second stage of the study. Therefore, researchers designed another online self-administered survey that included four open-ended questions and twentyseven close-ended questions (See Appendix C).

The design of this new instrument was based upon the one used at the first stage of the research, but it included some additional improvements, such as shorter videos, more straight forward questions, and mandatory responses. These changes aimed at assuring more reliability in the data gathering process. It was first piloted with one participant. Then it was revised and validated by one professor at the University of Costa Rica and the research tutor. Next, forty-eight teachers were contacted by phone and email to participate in the new survey. Nevertheless, in spite of the fact that some of them were asked to join the sample even four times, only thirty-three teachers submitted their responses.

This second research instrument was divided into four parts. instrument one, the first part of the survey included five questions about the interviewees' profile (gender, age, job category according to MEP parameters, workplace and ownership of a computer at home).

In the second and third part of the survey, participants watched two videos with concise descriptions of two groups of Web 2.0 tools. The first group included social networks, Google Sites and blogs. The second group included Survey Monkey, wikis, Voki, Voice Thread, Voxopop, Audacity, WebQuest and screencasts. After watching each video, interviewees had to answer five questions. The questions were about (a) the Web 2.0 tools they had used: (b) the way they implemented these tools in their classes; (c) the reasons for using these Internet resources; (d) some factors that might refrain teachers from employing Web 2.0 tools; and (e) their perception towards the tools they would like to try.

Finally, in the fourth part of the survey, participants were asked to rank their level of agreement with four propositions about the benefits of using Web 2.0 tools in the English class. Also, they had to identify reasons that hinder teachers from implementing these digital resources.

4. Analysis of the information

The information gathered during the first stage was analyzed using a coding process, i.e. the text was segmented and labeled in order to form descriptions and broad themes in the data (Creswell, 2008, p. 251). First, researchers translated into English and transcribed all the participants' answers. Some of them were summarized in order to facilitate analysis. For example, when being asked about the ways they had used the Web 2.0 tools mentioned in the first video of the survey (Cuadernia, Blogger, Google Drive, Google Sites and social networks), one interviewee answered: "Only as a means to share information with a group or to send messages to students." hence researchers summarized it as "To share information."

Similar responses were grouped together in order to eliminate redundant and overlapped answers. Specifically, responses such as "I have used YouTube to make students write a reaction to a video and either discuss it in class or post it to a class blog," "To have students practice going to and will" and "Students use the exercises that are in the blog" were all reported as "To make students practice the language." Following this method, 118 responses to the guestions of the third part of the first research instrument were reduced to 89 answers.

Next, participants' responses regarding teachers' perception towards Web 2.0 tools were labeled with codes, that is key words or phrases that describe the underlying meaning of a text segment (Creswell, 2008, p. 251). For instance, when interviewees were asked why they had used these tools in their English classes, they provided responses such as "To innovate with tools that students are familiar with." "They are highly acceptable among students" and "Students like them." These three answers were labeled with the code "Acceptance of the tools." Correspondingly, when being asked about factors that might influence English teachers not to use these tools in the classroom, teachers' responses "A lack of self-motivation," "A lack of interest to use technology," "Apprehension to innovate" and "Teachers feel lazy about using technology" were all coded as "Teacher's resistance."

Nevertheless, it must be acknowledged that not all the participants' responses were coded; some of them could not be labeled because they did not include enough information. For instance, when being asked about the reasons for using Web 2.0 tools in class, a teacher's response "they are useful" did not provide the researchers with a particular context to correlate that information. On the contrary, a response such as "They are useful to clarify doubts" was clear enough to be labeled with the code "Interaction."

At the end, researchers identified 26 different codes that were classified into three groups, according to the subject addressed (Teacher' perception, Negative factors, and Motivation factors). Next, codes were reduced into broad themes, i.e. "similar codes aggregated together to form a major idea in the database." (Creswell, 2008, p.252) Thus, researchers identified eight relevant themes that describe educators' perception toward Web 2.0 tools and five themes that outstandingly deal with factors that might encourage the implementation of these tools or refrain teachers from using them (See Appendix D).

Based on the data gathered through the coding process, researchers developed specific propositions about the research problems that would be tested with a new sample during the second stage on the study. In particular, seven statements were made regarding the reasons that had driven English teachers to use these tools in their classes. Additionally, six factors were proposed as the ones that would make educators implementing these tools. Furthermore, four main ideas were put forward concerning the benefits interviewees perceive about using Web 2.0 tools in the English

class, and in regards to negative factors, seven propositions were made on reasons that refrain English teachers from using these Internet resources (See Appendix E).

During the second phase of the study, since questions in the research instrument were more close-ended oriented, researchers drew mainly on statistics. For instance, questions such as "Why did you use these tools in your English class?" or "Why would you like to implement these tools?" were analyzed using graphs to identify the options or propositions with higher and lower figures. Similarly, the response percentages to questions that include perceptions about Web 2.0 tools using Likerttype scales were compared to find out whether positive opinions prevail over negative ones or vice versa.

Nevertheless, some coding analysis was also necessary during the second stage of the research, especially for the open-ended questions. For example, responses to the question "How have you used these tools (social networks, Google Sites, blogs)?" were labeled with codes in order to group similar answers. However, it was not necessary to search for themes since the information gathered was really concise.

Chapter IV

Results and discussion

First Stage

Although thirty-one teachers were invited to participate in the research project during the first stage, only twenty-two answered the first online self-administered survey. Nevertheless, due to some inconsistencies and lack of coherence, researchers took into consideration only the responses of twenty participants.

As already mentioned in chapter III, the first part of the interview was used to collect some demographic data about participants that was reported only with informative purposes. The second part of the survey had two specific questions about the way participants have used computers. Data reveals that all interviewees have a computer with Internet access at home; they use it to perform tasks such as word processing, email communication and to look for information for teaching.

Next, in the third part of the interview teachers were asked about a first group of Web 2.0 tools (Cuadernia, Blogger, Google Drive, Google Sites, and social networks). They mentioned which of these tools they had used in class, how they implemented them, and the reasons why they employed them. Interviewees reported 20 tools used in total. They were able to mention more than one tool in their responses.

Concerning this first group of digital resources, seventeen interviewees (85% of the sample) stated that they had used at least one of them while three participants (15% of the sample) noted that they had never tried them.

As shown in Figure 1, the most popular tool implemented by teachers is social networks. Nevertheless, this resource has been mostly applied as a means of communication. For instance, teachers have employed social networks mainly to send messages, clarify doubts, and assign homework. Only one teacher reported that she had implemented this tool to make students practice the language by having them publish information about a given task.

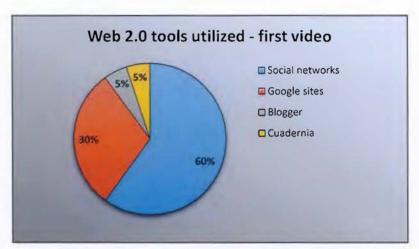


Figure 1. Percentages of responses on Web 2.0 tools used by participants. N=20

Google Sites is the second most popular tool interviewees reported. Although data suggests that this resource has been used to promote language practice, it is not clear if teachers who employed it have fostered the practice of active or passive language skills. Moreover, it is worth to analyze some possible reasons why only six teachers out of twenty have drawn on Google Sites, taking into account that every teacher in the sample population was trained on how to apply this tool and was requested to design a website for their classes.

Blogger and Cuadernia are respectively the third and fourth tools utilized. The former has been implemented to post exercises in which students practice mainly their passive language skills. For example, they read and listen to different materials first, and then they are requested to do written exercises. Concerning the latter, the interviewee who tried it stated "[it was used] with topics like vocabulary and verbs." Likewise, regarding the set of tools described in this part of the survey, another important aspect that deserves additional investigation is the fact that some teachers have drawn on these tools for doing research. For instance, three teachers claimed to have employed social networks and Google Sites to search for and download information regarding the topics studied in their class.

Nevertheless, some of the reasons why teachers used the Web 2.0 tools previously mentioned are the tools acceptance, their easy access and the interaction they promote. Additionally, interviewees claimed that this kind of applications increases creativity among students and makes classes more enjoyable and dynamic. Furthermore, they perceived these resources as good means to facilitate students' exposure to the language.

Thereafter, teachers answered which Web 2.0 tools they would like to implement in their classes and the reasons for doing so. Interviewees were able to mention only one tool. As shown in figure 2, Cuadernia was pointed out as the application most teachers would like to try while Google Sites is the one less preferred.

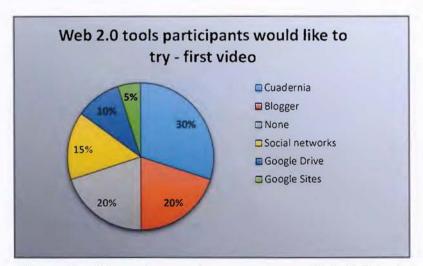


Figure 2. Percentages of responses on Web 2.0 tools participants would like to try from the first video. N=20

Concerning why they would like to employ these tools, participants reported that the need of innovation and the interaction and creativity these resources facilitate are the main reasons. For example, regarding the need of innovation, some interviewees mentioned that these applications break traditional ways of instruction. Moreover, they stated that not only students but also teachers are able to do activities in a different way by implementing these tools in the language class. Similarly, educators reported that these resources promote creativity on both teachers and students while they also enrich students-teacher interaction. Furthermore, some other reasons reported were the fact that Web 2.0 tools encourage instructors to be updated with the use of technology, and that they make classes more enjoyable than when teachers use conventional methods (board and markers).

In the same way interviewees were surveyed about the first group of Web 2.0 tools, they were asked to submit their responses about the following Internet resources: Survey Monkey, wikis, Voki, VoiceThread, Voxopop, Audacity, WebQuest, and screencasts. Participants mentioned 20 answers. Data reveals that these tools are not as popular as the first ones interviewees were asked about (See Figure 3).

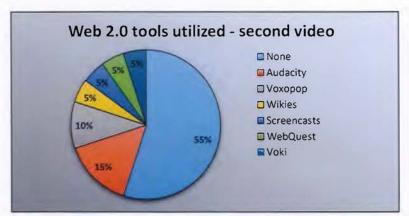


Figure 3. Percentages of responses on Web 2.0 tools used by participants. N=20

Analyzing the teachers' responses more carefully, a couple of inconsistencies emerged. First, an interviewee stated that she had used a wiki, but she did not explain how. Second, another teacher reported that she had tried a WebQuest to "have students answer questions about two topics given." However, it is important to clarify that a WebQuest is not an online questionnaire. Thus, researchers could not validate these answers.

Despite the fact that these tools are not so popular among most teachers, clear and interesting ways to apply them were reported. For instance, there was a participant who used a screencast to record role plays in which students performed routine activities in the context of the human resources department of a company. Similarly, another educator tried Voki in an innovative way: students reproduced their written works orally. Thus, both tools were applied to reinforce the practice of active and passive language skills. Likewise, to have specific speaking practice, two different teachers in the same school drew on Voxopop. Their students were asked to participate in discussions about given topics and record their comments using the tool. Finally, another Internet resource that interviewees have utilized is Audacity. Data suggests that it has been used simply as an editing tool for creating listening exercises.

In regard to the reasons for using the Internet resources from this second set, a relevant aspect is the interviewees' positive perception about how these tools foster language output from students. For example, teachers stated that they have tried these applications because they make students' opinion easier to know. Furthermore, participants claimed that these digital resources make learners practice pronunciation and new vocabulary, and they facilitate the evaluation of several students at the same time. Another reason stated is the acceptance of Web 2.0 tools by both educators and pupils. Teachers considered that students like this kind of applications, while they themselves find them interesting. Finally, class enjoyment and the need of innovation are two more reasons why interviewees have implemented these Internet resources.

When teachers were asked about the applications from this set (Survey Monkey, wikis, Voki, VoiceThread, Voxopop, Audacity, WebQuest, and screencasts) they would like to implement in their classes, they reported 20. Most tools had the same percentage of preference except for Audacity that obtained the highest percentage, while Voice Thread had the lowest percentage of all (See Figure 4).



Figure 4. Percentages of responses on Web 2.0 tools participants would like to try from the first video. N=20.

Reporting on the reasons why they would like to implement these Web 2.0 tools, teachers again pointed out the advantages that these resources have to promote language output from students. For example, they claim that these Internet applications are useful to practice language skills, especially listening and speaking. Students might be able to record themselves and listen to their recordings so that they could correct their own mistakes. Moreover, teachers perceive the use of these tools as a way to satisfy a need of motivation and class enjoyment. They claimed that these digital resources are innovating tools that add variation to classes and catch the students' interest and help increase motivation. Another important reason reported for incorporating these Internet applications is the interaction they promote. Some teachers stated that by using these resources students learn how to work in groups. many people would be able to do the same task at the same time, and classes would become more interactive.

In brief, most of the Web 2.0 tools from this second set of resources remain unknown by the majority of the sample population. Therefore, it is necessary to determine why most of the teachers do not know these tools under the assumption that they all received the same training sponsored by MEP in which some of these resources were presented. Researchers wonder whether the content for the training participants received was consistent throughout all the workshops.

Finally, the fourth part of the survey included five specific questions regarding teachers' perceptions of Web 2.0 tools. First, teachers were asked how they thought the use of Web 2.0 tools could change students' attitude towards ESL learning. Eighteen participants responded to this question with valid answers while the other two provided irrelevant information (one teacher merely answered yes, whereas the other reported the tools that she had used).

All the valid responses show positive reactions towards the implementation of Web 2.0 tools. For instance, six teachers (33% of the population) reported that motivation is the main benefit derived from using these resources since students like them a lot. Additionally, five participants (28% of the population) admitted that pupils find these tools appealing and interesting, thus implementing this kind of resources in class makes it more attractive. Likewise, four interviewees (22% of the population) stated that interaction is another advantage these applications might bring to the class. They consider that Web 2.0 tools engage both teachers and students to interact more, learning becomes more interactive, and learners are able to interact even with people out of the classroom. In like manner, three educators (17% of the population) observed language-use benefits. They argue that this kind of tools helps students to lose their inhibitions while practicing the oral skill. Also, they claim that learners can improve their language skills when using these resources appropriately because they foster self-correction. Last, two additional advantages of implementing Web 2.0 tools teachers pointed out are their easy adaption to the curriculum and the potential to encourage creativity in class.

In reference to the second question, teachers were asked what factors they thought could influence educators to not use Web 2.0 tools in the classroom. Twenty participants provided relevant information. In fact, they reported 44 factors that could stop them from implementing these Internet resources. The factors were classified into four main categories: factors that deal with resources, training and knowledge, teachers' resistance, and teachers' time. According to the number of responses, they were ranked as follows. First, teachers mentioned factors that deal with resources (43% of the responses). They referred to availability of computers (no computers at all or not enough for all students), lack of Internet access, and the suitability and condition of the resources available. Second, factors that deal with training and knowledge (30% of the responses) were reported. For instance, participants noted that some colleagues do not know how to use a computer, some others are little skilled in using Web 2.0 tools, there is lack of training in the implementation of these resources in class, and that the training they had was not long enough and should have been more helpful and concise. Third, interviewees pointed at factors that deal with teachers' resistance (18% of the responses). They admitted that some colleagues are apprehensive about using the Internet and innovating with technology. Further, some

of them considered that age particularly makes other educators resistant to try these online applications in their English class. In addition, some teachers lack selfmotivation while others seem apathetic or are uninterested about technology. Fourth, factors that deal with teachers' time (9%) were mentioned. Teachers argued lack of time to cover the course contents. Consequently, they are more concerned in what to teach than how to do it. Likewise, they reported lack of time to do research on how to use Web 2.0 tools.

Concerning the third question of the survey, participants were asked if they had been affected by any of the factors they reported before that may stop teachers from using Web 2.0 tools. Although twenty participants reported negative factors in the previous question such as lack of Internet access, not enough skills in Web 2.0 tools or apprehension to innovate through technology among others, only five responded that they had been indeed influenced by these factors. Moreover, two educators responded that they had not been influenced at all. The other thirteen teachers did not answer this question. We might think that they had also been influenced due to the fact that they noted negative factors. However, researchers mistakenly asked participants to respond to the two questions together; what factors English teachers thought might refrain from using Web 2.0 tools and if those factors had ever influenced teachers in some way. The twenty participants answered the first question, but only seven responded to the second.

Regarding the fourth question, participants were asked how English teachers could be motivated to use Web 2.0 tools in class. They reported 20 responses, which researchers classified and ranked. They believe that the training is the most significant aspect that teachers take into consideration when they have the opportunity to implement a new tool in class. In fact, 85% of the responses (15) pointed out to this

factor as the way to motivate educators to use Web 2.0 tools. Moreover, participants stressed some qualities that training must have. For example, they mentioned that training about Web 2.0 tools should give teachers more time to learn how to use the resources. In addition, they said that training should be more concise, pragmatic and helpful for educators so that they can feel more confident when they have to teach using these applications. Another important factor that interviewees pointed out is that educators should have more commitment regarding the implementation of this kind of tools. They admitted that some teachers attend training, but they do not apply the new technologies in class. Finally, interviewees replied that school facilities might also encourage teachers to use Web 2.0 tools. In fact, they argue that having an English lab and to keep it well equipped are fundamental to motivate instructors to incorporate this kind of technology.

Last, participants were asked how important it would be for them to use Web 2.0 tools in their classes and why. From the total population, 90% (18 teachers) mentioned that it was very important while 10% (2 teachers) stated that it was not so important. Concerning the positive answers, participants indicated that the use of these tools would be very important because applying Internet resources in class catches students' attention and makes teaching more motivating, it increases students' interest in the language, it breaks the monotony of conventional instruction, and it facilitates work to both teachers and students. On the other hand, the two participants who stated negative ideas about the application of these resources said that most of the tools are not really appealing, they could become monotonous, and that there should be a balance in the usage of these technologies because teachers could overuse them in class.

Second Stage

For the second phase of the investigation, a different sample made up of 33 teachers filled out a new online self-administered survey that included four open-ended questions and twenty-seven close-ended question, divided into four parts (See Appendix C).

The first part of the survey included five questions about the interviewees' profile (gender, age, job category according to MEP parameters, workplace and ownership of a computer at home). Data reveals that this new sample is composed by nine men and 24 women. Most participants (76%) are 35 years old or younger and are postgraduates in TESOL. Similar to the first sample, these interviewees have a computer at home with Internet access available.

The second part of the survey intended to collect data regarding the Web 2.0 tools teachers have used; the way they implemented these applications in their classes; the reasons for using these Internet resources; some factors that might stop teachers from employing these online technologies and their perception towards the Web 2.0 tools they would like to try.

In the same way that researchers did it with the first online research instrument, participants watched two videos with concise descriptions of two groups of Web 2.0 tools. The first group included social networks, Google Sites and blogs. The second group included Survey Monkey, wikis, Voki, Voice Thread, Voxopop, Audacity, WebQuest and screencasts.

In relation to the Web 2.0 tools shown in the first video, 25 participants (76% of the sample) noted that they had used at least one of them, while eight interviewees (24% of the sample) claimed that they had never tried them. Teachers mentioned 39 tools used in total. The most commonly used tool reported is social networks, as shown in Figure 5.

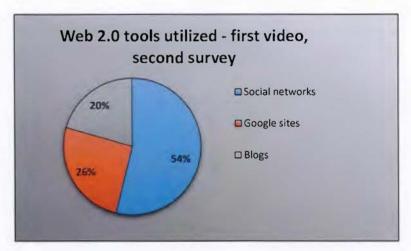


Figure 5. Percentages of responses on Web 2.0 tools used by participants. N=39.

Participants have drawn on social networks in two main ways. First, more than a half of the teachers who have tried social networks stated that they had made use of it to encourage language practice. For instance, educators have tried YouTube to download videos to be further analyzed either in class or at home. The other interesting application of this tool is related to promote class discussion about particular topics. For example, one interviewee reported that she created a social network group for each of her classes in which she had shared website links for additional practice. Similarly, another teacher mentioned that she designed an activity in which her class had to search for the meaning of idioms and share their findings with their peers through a social network. In the same way, one more participant stated that she asked her students to publish pictures in a social network and make comments about them both in class and at home.

Google Sites is the second tool participants have utilized the most. Interviewees reported that it has been used for three main reasons. First, both teachers and students have employed it to find out information related to class topics. At this point, it is worth mentioning that, although participants were explicitly informed about what Google Sites is through a video, it seems that they are taking the Google search engine for the tool Google Sites. Consequently, the validity of their answers in this matter might not be high. Secondly, some interviewees noted that they have drawn on this Internet resource to promote language exercises. Particularly, listening and reading exercises as well as vocabulary practices (word search and warm-up exercises) have been included in websites designed by some educators implementing Google Sites. The third reason why participants have tried Google Sites in class is to assign homework or projects. Nevertheless, data gathered does not provide enough support to determine whether educators have designed their own sites for class projects, or they have instructed students to use sites designed by others, and even to design their own sites following the teachers' requirements for a particular project.

The third tool mentioned is blogs. Some interesting educational applications of this resource were stated. For instance, one participant reported that he administers his own blog through which he shares tailored content with his class. In addition, another interviewee has made her students create specific blogs for class projects. At the same time, blogs have been used to promote language practice. Specifically, some educators have selected them to post exercises for reading, writing, and even watching videos to promote listening.

In order to identify the reasons for employing the Web 2.0 tools mentioned before, participants were asked to choose from seven different propositions. Moreover, they were allowed to choose more than one option. As shown in Figure 6, from 121 reasons reported, "The tool is highly accepted by students (it is interesting and looks familiar)" and "The tool facilitates students' exposure to English (they allow including a wide variety of contents in the target language)" are the two reasons that stand above the rest.

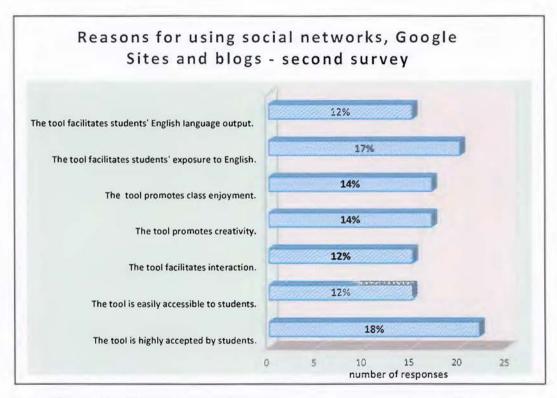


Figure 6. Percentages of responses on reasons why participants used the Web 2.0 tools shown in the first video. N=121.

Afterwards, interviewees who had used social networks. Google Sites, and blogs were asked about some factors that could have affected them when applying these Internet resources in their classes. Researchers drew on a five-level Likert-type scale to have participants assess how often they had felt affected by factors that dealt with the Internet service and computers.

As shown in Figure 7, when considering negative perceptions only (regularly and always), "Available computers quality" was the factor that prevails over the rest. On the other hand, taking into consideration only positive perceptions (never and rarely), "Speed and stability of the Internet connection" was the factor that stands out.

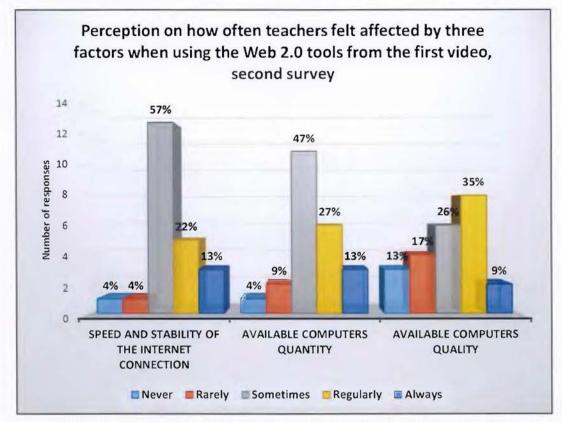


Figure 7. Percentages of responses on how often teachers perceived they were affected by factors that deal with Internet service and computers when they used social networks, Google Sites and blogs. N = 23.

Thereafter, all the teachers that had used one tool of the three mentioned in the first video of the survey (25 participants) were asked which other tool they would like to try. 68% of the sample (17 teachers) stated that they would like to implement another tool, while 32% (8 teachers) would not like to use any of them. Analyzing affirmative responses, only 11 out of the 17 participants provided valid answers. From the total of the valid answers considered (14 responses), 64% (9) corresponds to Google Sites, 29% (4) corresponds to blogs, and 7% (1) corresponds to social networks.

Consequently, Google sites is the online resource most interviewees who had tried at least one of the tools mentioned in the first video would like to use.

In regard to the reasons interviewees pointed out to try another tool, they were asked to choose from six different propositions as shown in Figure 8. One more time, they were allowed to select more than one option. In total, 46 reasons were mentioned. Interestingly, all reasons are equally important since they share the same percentage of the total answers (17.39%), except for "To promote class enjoyment (have students use something they like and find interesting)" which is a little lower (13.04%).

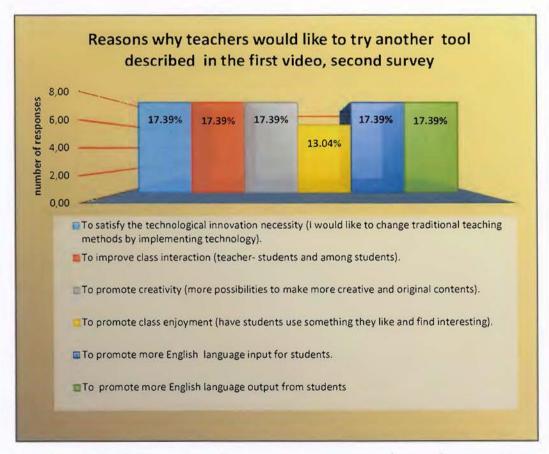


Figure 8. Percentages of responses on reasons why teachers would like to try another tool (social networks, Google Sites or blogs). N=46.

At the same time, regarding the participants that had not used any of the web 2.0 tools described in the first video, they were asked whether they would like to try one or not. It is worth mentioning that they all would like to try at least one. In fact, from eleven options reported, Google Sites is the one that interviewees like the most (6 answers - 55% of the total). Blog is the second tool preferred (4 answers - 36% of the total), and social networks is the third option selected (1 answer - 9% of the total).

From 29 reasons reported to try one of these tools, the main reason is "To satisfy the technological innovation necessity (I would like to change traditional teaching methods by implementing technology)." This reason represents 24% of the total answers reported (See Figure 9).

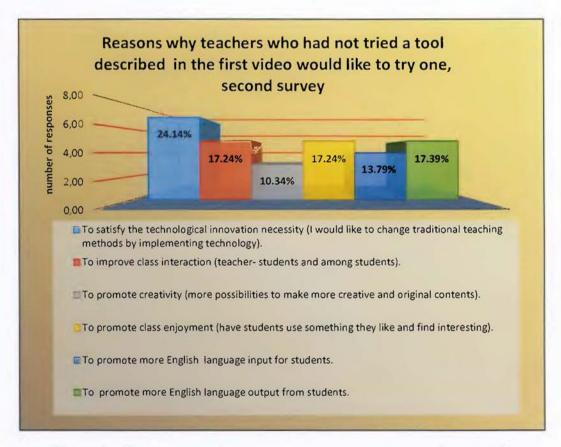


Figure 9. Percentages of responses on reasons why teachers would like to try social networks, Google Sites or blogs. N=29.

In the same way that participants did with the first video, they were required to watch another video that included a short description of seven new Web 2.0 tools (Google Drive, Survey Monkey, Voxopop, Voki, wikis, screencasts and Audacity) and respond to some questions.

First, interviewees had to mention which Web 2.0 tool described in the second video they had tried. They reported 22 tools used in total. According to their answers, 11 teachers (33% of the sample) had tried at least one tool whereas 22 (67% of the sample) had not used any of them. The most commonly used tool reported is Google Drive In fact, six teachers (27% of the sample) had employed it (See Figure 10).

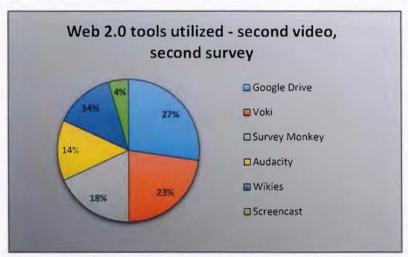


Figure 10. Percentages of responses on Web 2.0 tools described in the second video of the second survey used by participants. N=22.

There are two main ways in which participants have implemented Google Drive. First, teachers have drawn on it to share information. For instance, one interviewee shares class grades through this online resource, while another shares videos and class presentations. Another teacher uploads files that students download in

class. Second, participants have tried Google Drive to assign class projects. They had required their students to employ this Web 2.0 tool to work collaboratively on class assignments by sharing and editing together works online.

The second tool reported is Voki. From the total sample, 23% (5 participants) has tried it. It has been used to promote language practice. For example, one participant asked her students to create a Voki to summarize what they had studied in class. Another educator implemented Voki to have students practice pronunciation. In the same way, some teachers have used Voki to create class content. For instance, one interviewee usually incorporates Vokis in his class blog to introduce activities and topics to students.

The third tool participants referred to is Survey Monkey. From the total sample, four participants (18%) has implemented it. The two main purposes this tool has been used are (1) to carry out surveys to test students' knowledge and (2) to assign class projects. Nevertheless, participants' responses did not explain how teachers used this third tool to work on class projects.

As previously shown in Figure 10, other Web 2.0 tools that teachers have tried are Audacity, wikis and screencasts. The first has been implemented to prepare class materials (editing videos) as well as to promote language practice by having students record themselves and monitor their pronunciation. Concerning the other two tools (wikis and screencasts), participants just stated that they had tried them to work on class projects, but they did not explain how they had used these Internet resources for that purpose. An interesting remark is that no teacher had used Voxopop.

Interviewees were asked to choose from seven different propositions the reasons why they employed the Web 2.0 tools mentioned in the second video. Likewise, they were allowed to choose more than one option. From 46 reasons mentioned, "The tool promotes creativity (both teachers and students are able to design creative and original course contents)" and "The tool facilitates students' English language output (they allow teachers to use the written and oral students' output for learning purposes)" are the two reasons that stand above the rest (See Figure 11). Thus it is worth to notice that, besides promoting creativity, having students practice the language is the main reason why teachers drew on these Internet resources.

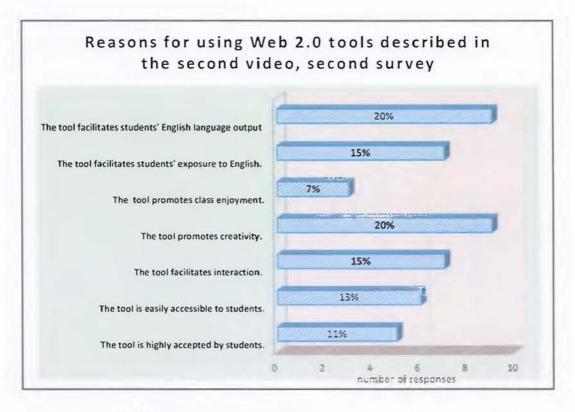
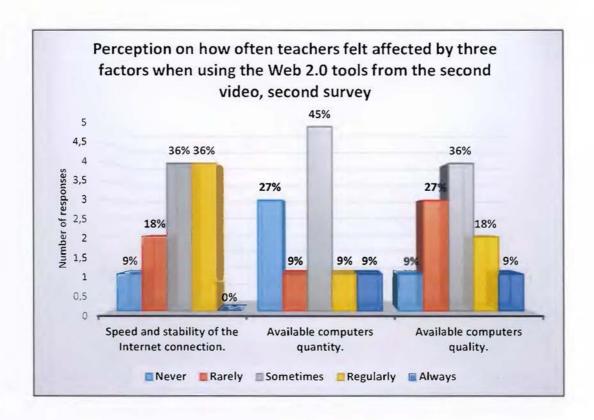


Figure 11. Percentages of responses on reasons why participants used the Web 2.0 tools shown in the second video of the second survey. N=46.

Concerning the factors that might refrain teachers from using the Web 2.0 tools from the second video, researchers drew on the same five-level Likert-type scale used for the first video. When considering negative perceptions only (regularly and always), "Speed and stability of the Internet connection" was the factor that stands out of the rest. In like manner, taking into consideration only positive perceptions (never and rarely), the same factor prevails over the rest (See Figure 12).



Percentages of responses on how often teachers perceived they were affected by factors that deal with Internet service and computers when they used the tools described in the second video of the second survey. N=11.

Afterwards, all the teachers that had used at least one tool of the seven mentioned in the second video of the survey (11 participants) were asked whether they would like to try another Web 2.0 tool from the same set or not. 55% of the sample (6 teachers) mentioned that they would like to try another while 45% (5 teachers) would not use any. As shown in Figure 13, wikis was the tool most teachers would like to try (4 teachers - 29% of the sample), whereas the other six have similar values.

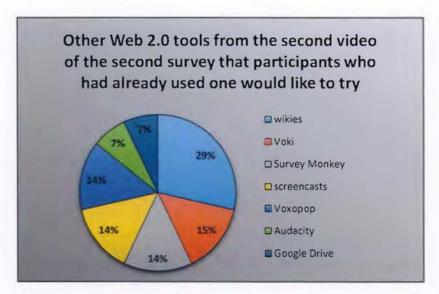


Figure 13. Percentages of responses on Web 2.0 tools described in the second video of the second survey that participants who had already used at least one would like to try. N=14

Considering the reasons participants pointed out to try another tool, they were asked to choose from six different propositions. In the same way they did it before, they were allowed to select more than one option. In total, 25 reasons were mentioned. As shown in Figure 14, "To promote more English language input for students" and "To promote more English language output from students" are the two reasons that prevail over the rest.

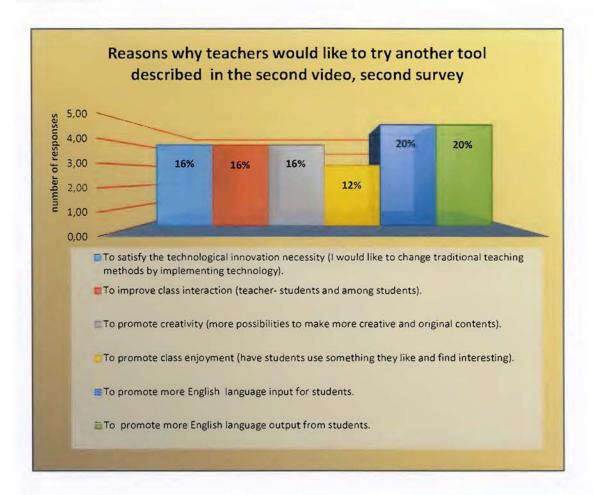


Figure 14. Percentages of responses on reasons why teachers would like to try another tool described in the second video of the second survey. N=25.

On the other hand, regarding the participants that had not used any of the tools from the second set (Google Drive, Survey Monkey, Voxopop, Voky, wikis, screencasts and Audacity), they were asked whether they would like to try one or not. Interestingly, 20 teachers (91% of total sample) would like to try at least one. In fact, from seventy-five options reported, Google Drive, Voki, screencasts and Audacity were the tools that interviewees liked the most (each one was mentioned 13 times, which represents 17% respectively of the total responses). The second tools preferred were Voxopop and Survey Monkey (each one was mentioned 8 times, which represents 11% respectively of the total responses). Wikis was the option that interviewees selected the least (7 responses – 9% of the total answers).

The main reason why teachers would try one of these tools is "To satisfy the technological innovation necessity (I would like to change traditional teaching methods by implementing technology)." From 82 responses, the previous reason represents 24% (20 answers). The last reason ranked is "To improve class interaction (Teacherstudents and among students)." It stands for 13% (11 answers) of the total responses. As shown in Figure 15, all the other reasons mentioned have similar values.

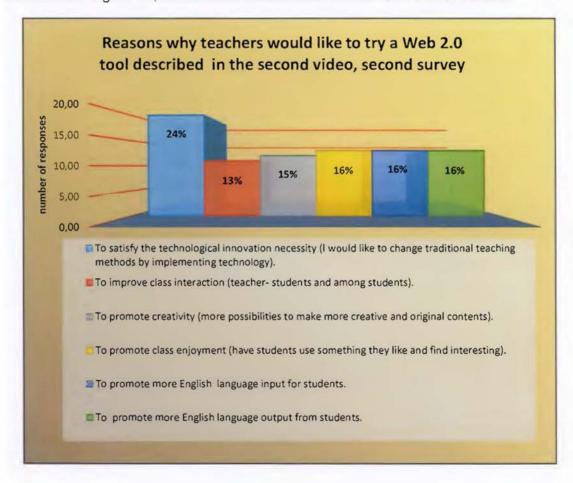


Figure 15. Percentages of responses on reasons why teachers would like to try a web 2.0 described in the second video of the second survey. N=82.

The last part of the second survey (Part IV) included two sections. In the first one, a five-level Likert-type scale was used to have teachers report their degree of agreement with four statements about some benefits of applying Web 2.0 tools in class. As shown in Figure 16, there is a strong agreement with all the statements. being "These tools make easier interaction both within and out of the classroom" the proposition that slightly stands out over the rest. On the other hand, the degree of disagreement with the four ideas is almost non-existent. At the same time, the affirmation to which more participants showed a neutral position was "When used appropriately, these tools improve students' linguistic skills."

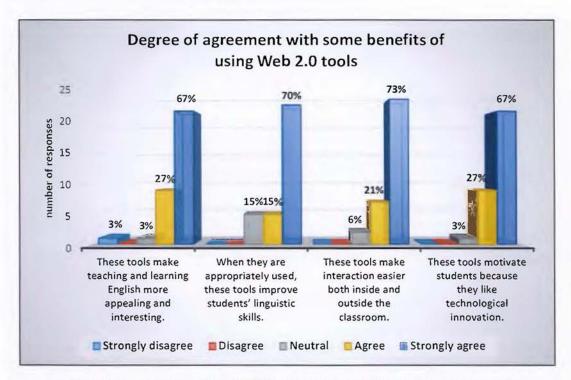


Figure 16. Percentages of responses on degree of agreement with some benefits of using Web 2.0 tools. N= 33.

In the second section of the fourth part of the survey, participants were asked to identify reasons that make teachers not use Web 2.0 tools in their classes. Seven different options were given and interviewees were allowed to choose more than one. Moreover, they were also allowed to propose any other reason not included in the

list. A total of 119 reasons were reported: 117 from the list given and 2 new reasons (Awful Internet connection and lack of Internet service). As shown in Figure 17, the factor most participants selected was "Teachers do not know or have very little knowledge about these tools." It stands for 20% (24 answers) of the total responses. The last reason from the list ranked is "Teachers lack interest about technological innovation." It represents 8% (9 answers) of the total responses. considering each reason individually, it may be said that lack of knowledge is the main cause that affects the implementation of Web 2.0 tools.

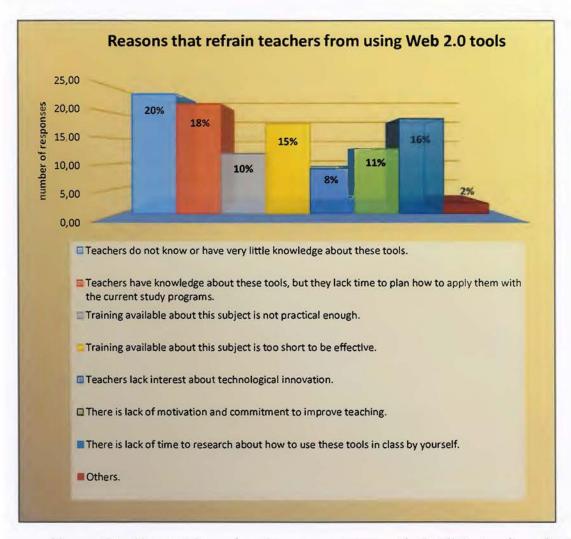


Figure 17. Percentages of responses on reasons that refrain teachers from using Web 2.0 tools. N=119.

Nevertheless, it is worth to mention that some identical themes (e.g. time, training, etc.) underlie different reasons. For example, "Teachers have knowledge about these tools, but they lack time to plan how to apply them with the current study programs" and "There is lack of time to research about how to use these tools by yourself' refer to the same theme: Time. Both reasons stand for 30% of the total responses. Also, the theme Training groups together "Training available about this subject is not practical enough" and "Training available about this subject is too short to be effective." Both reasons represent 25% of the total answers. Likewise, "Teachers lack interest about technological innovation" and "There is lack of motivation and commitment to improve teaching" deal with the theme: Teacher's interest and commitment. Both reasons correspond to 19% of the total responses. Consequently, the lack of time must be considered as the main reason that impedes the implementation of Web 2.0 tools according to interviewees' perception. The second reason has to do with the quality and the length of the training. The subsequent reasons deal with the poor knowledge that teachers have about the use of Web 2.0 tools and the educators' lack of commitment and interest.

Finally, taking into account the reasons that make teachers not use Web 2.0 tools previously mentioned, they were asked to point out which ones had personally influenced them. In total, 42 answers were reported. As shown in Figure 18, most participants perceived that their own experience fitted into "Teachers have knowledge about these tools, but lack of time to plan how to apply them with the current study programs." This reason stands for 33% of the total responses. The subsequent reasons that interviewees were more identified with were "Teachers do not know or have very little knowledge about these tools" and "Training available about this subject is too short to be effective." They correspond to 21% and 17% of the total answers

respectively. Interestingly, when analyzing the themes that underlie each of the reasons that might have influenced teachers from not using these Internet applications, researchers found that the lack of time was again the most important reason based on the participants' experience, whereas the quality and the length of the training was the second. On the other hand, no participant considered that the lack of motivation and commitment had affected them in not using the tools. Moreover, all the other five reasons that teachers perceived that had affected them were related to the resources available at their workplaces. They claimed that (1) there were not English laboratories in their schools, (2) there was not Internet connection, and (3) there were only a few old computers available.

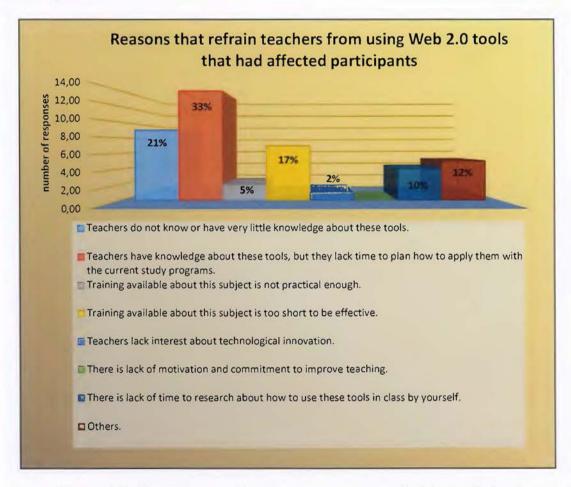


Figure 18. Percentages of responses on reasons that had refrained teachers from using Web 2.0 tools. N=42.

Chapter V

Conclusions

According to the results of this study, it has been noticed that social networks is the Web 2.0 tool that most participants used at Costa Rican vocational high schools. Researchers found that around half of the interviewees who have implemented that tool perceive it as a good resource to have students practice the English language. Notwithstanding the above, the rest of the educators do not take full advantage of this Internet resource for teaching English since they have drawn on social networks only as a means of communication, but not as a tool to teach the L2.

Google Sites was the second Web 2.0 tool that most participants have implemented. Data gathered in this research does not confirm whether the tool is used to foster language practice at first aim. Nevertheless, only a third part of the participants had tried this resource even though most of the teachers (90% of the total sample) have been trained on how to use this tool in the English class. Moreover, this application is one of the tools that most teachers would like to try since they perceive it as a good resource to promote language practice, creativity and innovation.

In addition, it was observed that the more collaboration and opportunities to practice the language active skills Web 2.0 tools enable, the less implemented these Internet resources are. As a result, applications such as wikis, Voki, Voxopop, and Google Drive, among others, were used in the language class only by a tenth of the total population.

Still, most teachers perceive that Web 2.0 tools do motivate students for learning English, make interaction easier among the actors of the teaching-learning process, and improve students' linguistic skills when they are appropriately used. Therefore, the

majority of teachers who have not ever used these tools would like to try them. In fact, the more active participation from students Web 2.0 tools require, the more willingness teachers have to implement these online resources.

Nevertheless, the participants' positive perception towards the potentialities of Web 2.0 tools in teaching English as a second language is not enough to extensively implement these resources in class. In order to achieve that goal, the Costa Rican education authorities must develop strategies to deal with three main factors that are preventing teachers from incorporating Web 2.0 tools in EFL instruction identified in this research: (1) the lack of time that restrains teachers from applying these Internet resources in the current study programs of MEP and doing research on how to use these tools by themselves; (2) the deficient quality and short time of the training teachers have had about implementing these applications in the English class; and (3) the low speed and irregular stability of the Internet connection available at schools.

Previous research has demonstrated that Web 2.0 tools certainly encourage collaborative learning combining the practice of both active and passive language skills in innovative and stimulating scenarios. These potentialities have been also proved by the experiences collected from several participants. Yet, the complaints of other participants in this study also reveal that training on the use of these Internet resources offered by MEP has not been really effective. Consequently, it is the researchers' belief that every single effort MEP could make in order to improve training on this issue would have a positive impact on the teaching of English as a second language in Costa Rican public vocational high schools.

Limitations

The researchers acknowledge the following limitations of this research study:

- Due to the fact that convenience sampling was used throughout the study. results cannot be generalized to other populations and settings.
- In spite of the fact that around 80 teachers were sent invitations several times and contacted by phone to participate during the gathering data stages of the research, only 55 educators submitted their online surveys.
- The use of open-ended questions in the online self-administered surveys made a few participants respond so concisely that researchers were not able to gather valid data.
- Researchers required participants to respond to two open-ended questions together in the first online self-administered survey; consequently, participants were more prone to answer the first question but to skip the second.

Recommendations

Some recommendations from this research study are listed below:

- The use of online self-administered surveys demands immediate participants' follow-up in order to validate inaccurate responses. Therefore, whenever possible, it is advisable to ask participants for a telephone number or an alternative email address to be contacted. In addition, it would be good practice to contact interviewees as soon as they submit their answers; otherwise, they might be unwilling to cooperate again.
- Although the majority of teachers acknowledge that they need to innovate through technology and they are willing to do it, the training that educators have

received so far is perceived as deficient. Most participants' concerns deal with the length and usefulness of the instruction available. Researchers would advise MEP authorities to group teachers according to their computer' skills and their time availability for further training. At the same time, educators, no matter their computer expertise, should be required to implement Web 2.0 tools with their current students for a while. Then, in subsequent training sessions, they should have significant feedback about their experiences.

The authors would recommend doing further research focused on three interesting aspects: (1) the students' perception towards the use of Web 2.0 tools in class, (2) the perceptions of teachers towards students' performance when applying these online resources in the English class, and (3) the effect of the variables Time and Resources as discouraging factors that stop educators from implementing Web 2.0 tools with a larger sample that might be analyzed with a quantitative research method.

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Appendix A

Costa Rican Public Vocational High Schools Used in this Research

The list includes the name (in Spanish) of each high school and its location (the name of the province where it is located).

- 1. Colegio Técnico Profesional de Escazú, San José.
- 2. Colegio Técnico Profesional de Puriscal, San José.
- 3. Colegio Técnico Profesional de Mora, San José.
- 4. Colegio Técnico Profesional de Palmichal de Acosta, San José.
- 5. Colegio Técnico Profesional de Vásquez de Coronado, San José.
- 6. Colegio Técnico Profesional Don Bosco, San José.
- 7. Colegio Técnico Profesional de Granadilla, San José.
- 8. Colegio Técnico Profesional Abelardo Bonilla, San José.
- 9. Colegio Técnico Profesional de San Sebastián, San José.
- 10. Colegio Técnico Profesional Uladislao Gámez, San José.
- 11. Colegio Técnico Profesional de Santa Ana, San José.
- Colegio Técnico Profesional de Educación Comercial y Servicios (COTEPECOS), San José.
- 13. Colegio Técnico Profesional de Calle Blancos, San José.
- 14. Colegio Técnico Profesional Dos Cercas, San José.
- 15. Colegio Técnico Profesional José Albertazzi, San José.
- 16. Colegio Técnico Profesional de Pavas, San José.
- 17. Colegio Técnico Profesional Mario Quirós Saso, Cartago.
- 18. Colegio Vocacional de Artes y oficios (COVAO), Cartago.
- 19. Colegio Técnico Profesional Jesús Ocaña, Alajuela.
- 20. Colegio Técnico Profesional de Flores, Heredia.
- 21. Colegio Técnico Profesional de San Pedro de Barva, Heredia.

Appendix B

Online Self-Administered Survey One

Web 2.0 Tools Incorporation in Vocational High Schools in Costa Rica: An Exploratory Research Study.

The purpose of this study is to identify which Web 2.0 tools are used for teaching English in vocational high schools as well as the teachers' perception in relation to the effectiveness of these tools to promote language learning.

You have been chosen to form part of this study because you attended the training "Estrategias de mediación pedagógica apoyada en recursos digitales para docentes y asesores de educación técnica del MEP" in 2013.

We appreciate your participation in this study. Your confidentiality and anonymity are assured. The data provided will be used only for academic purposes. By completing this form, you consent to the information to be used for research.

I Part. Participant's Profile

1.	Gender:
() Female
() Male
2.	How old are you?
() Between 18 and 25 years old
() Between 26 and 30 years old
() Between 31 and 35 years old
() Between 36 and 40 years old
() Between 41 and 45 years old
() Between 46 and 50 years old
() Between 51 and 55 years old
() 56 years old or older

classroom and / or at home.

rried

(() Sending and receiving tasks with students via social networks to be caut in the classroom and / or at home.
() Chatting with students about school issues.
() Searching for information related to educational matters.
() Improving your teaching skills in terms of creativity.
(di) Improving your teaching skills in terms of knowledge of the topic to be scussed in class.
() Other

III Part. Web 2.0 Tools Implementation

You will watch two videos with a brief description of several Web 2.0 tools. Some of these tools were introduced in the training that you atended last year "Estrategias de mediación pedagógica, apoyada en recursos digitales para docentes y asesores de educación técnica del MEP." After watching each video, please answer the questions.



1. Which tool(s) mentioned in this first video have you used in your English classes?

Check all the answers that apply.

() Cuadernia

() Blogger

() Google Drive

() Google Sites
() Social networks
2. If you have used these tools, please answer: How have you used them? Describe the activities in which you used these tools.
3. If you have used these tools, please answer: Why did you use these tools in your English classes? Mention at least two reasons that made you use these tools.
4. From the tools mentioned in this first video that you still have not used, Which one(s) would you like to implement your English classes? Check all the answers that apply.
() Cuadernia
() Blogger
() Google Drive
() Google Sites
() Social networks
5. If you would like to implement some of these tools (the ones that you have not used yet) in your English classes, please answer: Why would you like to do it? Mention at least two reasons.



	. Which tool(s) mentioned in this second video have you used in your inglish classes? Check all the answers that apply.
() Survey Monkey
() Wiki
() Voki
() Voice Thread
() Voxopop
() Audacity
() WebQuest
() Screencast
	7. If you have used these tools, please answer: How have you used them? Describe the activities in which you used these tools.

8. If you have used these tools, please answer: Why did you use these in your English classes? Mention at least two reasons that made you use these tools.	tools
9. From the tools mentioned in this second video that you still have no Which one(s) would you like to implement your English classes? Check all the answers that apply.	ot used
() Survey Monkey	
() Wiki	
() Voki	
() Voice Thread	
() Voxopop	
() Audacity	
() Web Quest	
() Screencast	
10. If you would like to implement some of these tools (the ones that y have not used yet) in your English classes, please answer: Why would like to do it? Mention at least two reasons.	
11. Have you used any other Internet resource that we have not mention yet? Please mention the name and describe how you have used it.	ioned

IV Part. General Opinion about the Implementation of Web 2.0 Tools

This is the last part of your survey. Please answer the following questions.
How do you think the use of Web 2.0 tools can change the students' attitude towards learning English as a second language?
2. What factors do you think might influence the English teachers to not use these tools in the classroom? Have you ever been affected by any of these factors? If so, how have they affected you?
3. How can teachers be motivated to use Web 2.0 tools in their English classes?
4. Personally, how important is using Web 2.0 tools in your English classes? Why?
Thank you very much for your valuable time and the information provided.
Please enter your name and cell phone number in case we need to contact you to ask you additional questions about the data provided. We assure you that all the information given is confidential and will be used only for academic purposes.
Enter here your name and phone number.
To send data and close the survey, please click on the "SUBMIT" button below.
Thank you.

Appendix C

Online Self-Administered Survey Two

Web 2.0 Tools Incorporation in Vocational High Schools in Costa Rica: An Exploratory Research Study.

The purpose of this study is to identify which Web 2.0 tools are used for teaching English in vocational high schools as well as the teachers' perception in relation to the effectiveness of these tools to promote language learning.

Web 2.0 tools are Internet applications and websites that allow us to create and publish content online as well as to work collaboratively.

You have been chosen to form part of this study because you work at a vocational high school and teach (or you have taught) conversational or technical English.

We appreciate your participation in this study. Your confidentiality and anonymity are assured. The data provided will be used only for academic purposes. By completing this form, you consent to the information to be used for research.

I Part. Participant's Profile

1. Gender: Check the appropriate option.
() Female () Male
2. How old are you? Check the appropriate option.
() Between 18 and 25 years old
() Between 26 and 30 years old
() Between 31 and 35 years old
() Between 36 and 40 years old
() Between 41 and 45 years old
() Between 46 and 50 years old
() Between 51 and 55 years old
() 56 years old or older

3. What is your professional category according to the parameters of the MEP? Check the appropriate option.
() MT 1 () MT 2 () MT 3 () MT 4 () MT 5 () MT 6
4. What vocational high school do you work for? Please type the name of the school. You can enter multiple names if you work in more than one.
5. Do you have a computer at home with Internet access? Check the appropriate option.
() Yes. () No.
II Part. Web 2.0 Tools Implementation (social networks, Google Sites, blogs) Please watch the following video about some Web 2.0 tools. After watching it, please answer the questions below.
CTPSS English Channel Algunas Herramientas Web 2.0
● ■0 0:00/123
6. Have you ever used any of these tools in your English classes? Check the appropriate option.
() Yes please proceed with question 7 () No please proceed with question 11

10. How often have these factors affected	ed you when using the Web 2.0 tools
you mentioned before in your classes?	Check the appropriate option.

			=		
	never	rarely	sometimes	regularly	always
The speed and stability of the Internet connection					
The quantity of the computers available					
The quality of the computers available					
11. From this set of implement in your		107.0			
	e proceed with proceed with	1121			
12. Which Web 2.0 classes? Check al		And the second s	implement in	your English	
() Social networks	() G	oogle Sites	()B	logs	
13. Why would you Check any of the fo	All the state of t		tool / these to	ools?	
() To satisfy the to traditional tead			and the second of the second o	and the same of th	е
() To improve cla	ss interaction	(teacher- st	tudents and an	nong students).	
() To promote cre original content	STREET, STREET	ve more pos	sibilities to ma	ke creative and	
() To promote cla	The state of the s	t (have stude	ents use some	thing they like	
() To promote mo	ore English la	nguage inpu	it for students.		
() To promote mo	ore English la	nguage outp	out from studer	its.	
Other					

III Part. Web 2.0 Tools Implementation (Google Drive, Survey Monkey, etc.)

Please watch the following video about some Web 2.0 tools. After watching it, please answer the questions below.



	you ever used any of these tools in your English classes? appropriate option.
() Yes () No	please proceed with question 15 please proceed with question 19
	tools have you used in your English classes? the options that apply.
	ncasts
	have you used these tools in your English classes? the activities in which you used these tools

	17. Why did you use these tools in your English classes? Check any of the following that apply					
() The tool is highly accepted by students (it is interesting and looks familiar).				iliar).	
() The tool is easily accessible to students (it is available for most students).				nts).	
() The tool facilitates interaction (teacher-student and among students).					
(The tool promotes creativity (both teachers and students are able to design creative and original course contents).				esign	
() The tool promo	THE RESERVE THE PROPERTY OF THE PARTY OF	oyment (stu	dents are pleas	ed and have fu	in when
() The tool facilita variety of conte		10.00		allow including	a wide
() The tool facilita use written and			guage output (t r learning purpo		ners to
	() Other					
() Other					
	Other 3. How often have ou mentioned be					0 tools
	3. How often have					0 tools always
your self	3. How often have	fore in your	classes? (Check the appro	priate option.	
your self of the s	The speed and stability of the nternet	fore in your	classes? (Check the appro	priate option.	
your self of the s	The speed and stability of the nection	fore in your	classes? (Check the appro	priate option.	

19. From this set of Web 2.0 tools, Is there any that you would like to implement in your English classes? Check the appropriate option.
() Yes please proceed with question 20 () No please proceed with question 22
20. Which Web 2.0 tools would you like to implement in your English classes? Check all the options that apply.
() Google Drive () Survey Monkey () Voxopop () Voky () wikis () screencasts () Audacity
21. Why would you like to implement this tool / these tools? Check any of the following that apply
To satisfy the technological innovation necessity (I would like to change traditional teaching methods by implementing technology).
() To improve class interaction (teacher- students and among students).
() To promote creativity (to have more possibilities to make creative and original contents).
() To promote class enjoyment (have students use something they like and find interesting).
() To promote more English language input for students.
() To promote more English language output from students.
Other

Web 2.0 Tools Incorporation in Vocational High Schools in Costa Rica: An Exploratory 71
IV Part. General View of Web 2.0 tools Using the following 1 – 5 scale, please indicate, by selecting the most correct response, the degree to which you agree with the statements listed below.
1: Strongly disagree. 2: Disagree. 3: Neutral. 4: Agree. 5: Strongly agree.
22. The tools described in this survey (the Web 2.0 tools) make teaching and learning English more appealing and interesting.
1 2 3 4 5
Strongly disagree Strongly agree
23. When they are appropriately used, these tools improve students' linguistic skills.
1 2 3 4 5 Strongly disagree Strongly agree
24. These tools make interaction easier both inside and outside the classroom.
1 2 3 4 5 Strongly disagree Strongly agree
25. These tools motivate students because they like technological

Strongly agree

innovation.

Strongly disagree

their English classes?
Check any of the following that apply
() A. Teachers do not know or have very little knowledge about these tools.
() B. Teachers have knowledge about these tools, but they lack time to plan how to apply them with the current study programs.
() C. Training available about this subject is not practical enough.
() D. Training available about this subject is too short to be effective.
() E. Teachers lack interest about technological innovation.
() F. There is lack of motivation and commitment to improve teaching.
() G. There is lack of time to research about how to use these tools in class by yourself.
Other
27. Which factors have personally affected you? Please enter the letter (A, B, C) or just "none".
Thank you very much for your valuable time and the information provided.
Please enter your name and cell phone number in case we need to contact you to ask you additional questions about the data provided. We assure you that all the information given is confidential and will be used only for academic purposes.
If you are filling out this survey again because you included wrong information the first time, please type "validate this questionnaire" and include your name again.
To send data and close this survey, please click on the "SUBMIT" button below. Thank you.

Appendix D

Coding Process of Data

Codes

Teachers' Perception

- 1. Acceptance of the tools 2. Access to the tools 3. Interaction.
- 4. Language input 5. Need of innovation 6. Class Enjoyment
- 7. Creativity promotion 8. Need to be updated 9. Language output
- 10. Students' motivation 11. Curriculum implementation 12. Class
- dynamics. 13. Diversity 14. Students' potential 15. Active learning
 - 16. Maximizing available resources 17. Job access

Motivation Factors

1. Training 2. Commitment 3. Time

4. Facilities.

Negative Factors

- 1. Teachers' resistance 2. Resources 3. Time
 - 4. Training and knowledge

Teachers' Perception

Acceptance of the tools Accessibility to the tools
Interaction Creativity promotion
Class enjoyment Language input and output
Technology innovation need Students' motivation

Themes

Encouraging or Discouraging Factors

Resources Time Training
Teachers' knowledge
Teachers' interest and commitment

Appendix E

Propositions Built on Data Gathered at the First Stage of the Research

REASONS FOR USING WEB 2.0 TOOLS

- •The tool is highly accepted by students (it is interesting and looks familiar)
- •The tool is easily accessible to students (it is available for most of them)
- •The tool facilitates interaction (teacher-student and among students)
- •The tool promotes creativity (both teachers and students are able to design creative and original course contents)
- •The tool promotes class enjoyment (when students use it they get fun and like it)
- •The tool facilitates students' exposure to English (they allow including a wide variety of contents in the target language)
- •The tool facilitates students' English language output (they allowed teachers to use the written and oral students' output for learning purposes)

REASONS WHY TEACHERS WOULD LIKE TO IMPLEMENT A WEB 2.0 TOOL

- •To satisfy the technological innovation necessity (I would like to change traditional teaching methods by implementing technology)
- •To improve class interaction (Teacher- students and among students)
- •To promote creativity (more possibilities to make more creative and original contents)
- •To promote class enjoyment (have students use something they like and find interesting)
- •To promote more English language input for students
- •To promote more English language output from students

BENEFITS DERIVED FROM USING WEB 2.0 TOOLS

- •The tools shown in this survey make teaching and learning English more appealing and interesting
- •When used appropriately, these tools improve students' linguistic skills
- •These tools make easier interaction both within and out of the classroom
- •These tools motivate students because they like technological innovation

REASONS THAT REFRAIN TEACHERS FROM USING WEB 2.0 TOOLS

- Teachers do not know or have very little knowledge about these tools
- •Teachers have knowledge about these tools, but they lack time to plan how to apply them with the current study programs
- Training available about this subject is not practical enough
- •Training available about this subject is too short to be effective
- •Teachers lack interest about technological innovation
- Lack of motivation and commitment to improve teaching
- Lack of time to research about how to use these tools by yourself