
UNIVERSITY STUDENTS' ATTITUDES TOWARDS THE USAGE OF WEB 2.0 TOOLS FOR LEARNING ESP. A PRELIMINARY INVESTIGATION

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Abstract. *Currently, there is much debate concerning Web 2.0 technologies and the changes they have brought to education. Web 2.0 tools are successfully being used in foreign language learning contexts, however, students can exhibit a variety of behaviours when confronted with them; therefore, it is important to determine their attitudes before planning any educational intervention. This study rests on Technology Acceptance Model (TAM), the most commonly applied theory for describing individual user acceptance of information systems. Six major variables of TAM (awareness, perceived usefulness, perceived ease of use, attitudes towards use, behavioural intention and actual system usage) and their relationship with ESP students' background factors are discussed in the study. The study resulted in establishing that the students' ability to use Web 2.0 tools was the only individual factor that had a positive relationship with their attitude, intention to use, actual system usage and awareness of Web 2.0 tools meant for learning English for Specific Purposes (ESP) at the university; therefore, this should be taken into*

consideration before integrating Web 2.0 tools into ESP curriculum and/ or planning any educational intervention.

Key words: *Technology Acceptance Model (TAM), Web 2.0 tools, foreign language teaching and learning, English for specific purposes (ESP)*

Introduction

Currently, there is much debate and excitement concerning the rapid development of the Internet and the changes it has brought to different areas of education. “O’Reilly media created the phrase *Web 2.0* in 2004 to refer to a supposed second-coming of the Web that allowed the users to collaborate and share information online in new ways”.¹ According to Conole and Alevizou (2010), a recurrent discourse around the application of *Web 2.0*, especially its tools like *Social Networks, Weblogs, Wikis, Podcasts, Second Life* or *You Tube* used in different educational contexts, “points to the notions of evolution and transformation; transformation in terms of transcending formal educational contexts; evolution in terms of facilitating more informal and non-formal learning contexts which blur the boundaries between categories of learners (student, adult-learner, or informal learner, autodidact). The arguments for this also centre on the notion that learners are now able to become more active producers, authors, evaluators and commentators within the learning arena they are engaged with”.² A number of tools are available and successfully being used for foreign language teaching and learning purposes, however, it has been established (Keller, 2007) that when confronted with a new information technology, individual users can demonstrate behaviours ranging from complete rejection, active resistance to genuine acceptance. For this reason, it is extremely important to determine students’ attitudes and habits regarding *Web 2.0* technologies before incorporating them into their curriculum and planning any educational intervention. According to Ware and Warschauer (2006), the new uses of technologies should be justified, i.e. based not on educators’ optimism or a priori rejection, but on empirical data that should be in line with the specificity of their use and the specificity of contexts.

The current study is a preliminary investigation conducted in 2014 prior to an experimental pedagogical intervention planned for the autumn semester of academic year 2017–2018 at Mykolas Romeris University, Lithuania to evaluate students’ attitudes and acceptance of several popular *Web 2.0* tools incorporated into a compulsory technology-enhanced “*English for Specific Purposes*” course.

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- 1 Thomas, M. *Handbook of Research on Web 2.0 and Second Language Learning*. New York: Information Science Reference, Hershey, 2009, p. 475.
 - 2 Conole, G., Alevizou, P. A Literature Review on the Use of Web 2.0 Tools in Higher Education. The Open University, Walton Hall, Milton Keynes, UK, 2010, p. 1-111. [interactive]. [accessed on 04-07-2015]. <https://www.heacademy.ac.uk/sites/default/files/Conole_Alevizou_2010.pdf>

The present research is aimed at determining students' attitudes and habits towards *Web 2.0* technologies and their impact on the acceptance of these technologies for learning *English for specific Purposes*.

The objectives of the present investigation are:

- to establish the attitudes and habits of *ESP* learners regarding the usage of *Web 2.0* technology;
- to identify their *Web 2.0* technology acceptance levels for learning *ESP*;
- to find out whether individual learners' background factors influence the acceptance of *Web 2.0* tools for learning *ESP*.

Research methods: The present study was conducted using a quantitative approach, a questionnaire and a descriptive methodology of data collection and analysis.

The investigation is based on the assumption that students' individual background factors such as their gender, an average of hours they spend online daily, their study programme and their ability to use *Web 2.0* tools may have an impact on their acceptance of *Web 2.0* tools for learning *ESP*.

1. Theoretical Framework

There are no doubts that the application of *Web 2.0* tools in language studies represents the state-of-the-art of Computer Assisted Language Learning (*CALL*), still, "there is an interesting gap in the area of theory for it. Unlike the case of second language acquisition in general, *CALL* does not have a dedicated theory yet and based on current trends it is unclear whether it will ever have a comprehensive one".³ Instead, *CALL* theory comprises "a set drawn from a number of sources including second language acquisition theories, general learning theories, linguistic theories, and human-computer interaction theories".⁴

This study is based on Technology Acceptance Model (*TAM*), "which is considered as the most influential and commonly applied theory for describing individual user acceptance of information systems".⁵ Based on the Theory of Reasoned Action (*TRA*) (Fishbein and Ajzen, 1976) it was proposed for the first time by Davis in 1989 in order to do research in the field of social psychology⁶ and is still being

3 Hubbard, P. An Invitation to *CALL*. *Foundations of Computer-Assisted Language Learning*, 2014. [interactive] [accessed on 23-04-2015] <<http://web.stanford.edu/~efs/callcourse2/CALL6.htm>>.

4 *Ibid*.

5 Lee, Y., et al. The Technology Acceptance Model: Past, Present, and Future. *Communications of the Association for Information Systems*, 2003, 12 (50):752 [interactive] [accessed on 23-04-2015] <<http://aisel.aisnet.org/cais/vol12/iss1/5>>.

6 Ramazani, M., et al. Effective Factors in E-learning Acceptance by English Language Students. *Journal of Emerging Trends in Computing and Information Sciences*, 2014, 4 (4): 400-408. [interactive] [accessed on 22-04-2015] <http://www.academia.edu/5413702/Effective_Factors_in_ELearning_Acceptance_by_English_Language_Students>

widely used by researchers in many spheres of interest to analyse and interpret the chronological sequence of events leading to the acceptance of certain technologies. Two specific beliefs, mainly, perceived usefulness and perceived ease of use have been identified by Davis (1993) as important user acceptance criteria in the original version of *TAM*; however, the model can be interpreted and revised to fit a particular context of technology being investigated. The present study is built on the version of *TAM* modified by Arshad, Tan & Hashim (2012). This version comprises six core constructs or dimensions, including *awareness*, *perceived usefulness*, *perceived ease of use*, *attitudes towards use*, *behavioural intention* and *actual system usage* as shown in Figure 1:

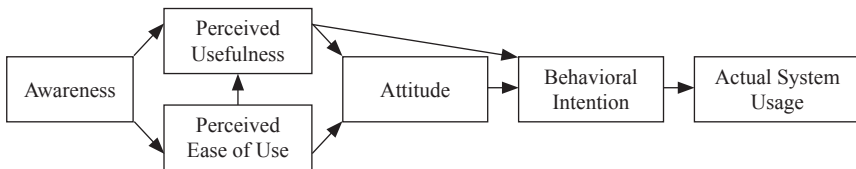


Figure 1. Technology Acceptance Model modified by Arshad, Tan & Hashim (2012)

In the present study **Awareness** is defined as the degree to which students are aware of using *Web 2.0* tools to assist them for learning a foreign language.

Perceived usefulness is the extent to which students believe that using a particular *Web 2.0* tool would enhance their foreign language learning.

Perceived ease of use is defined as the extent to which students believe that using a particular *Web 2.0* tool would be free of effort.

Attitude is explained as the degree to which students favour a certain *Web 2.0* tool for learning a foreign language.

Behavioural intention is operationalised as the continued students' intention to perform foreign language learning-related activities using one or another *Web 2.0* tool.

Actual system usage is explained in terms of the frequency of certain *Web 2.0* tools applied by students in a foreign language learning context.

2. Research Methodology

The present study was conducted using a quantitative approach; a questionnaire and a descriptive methodology were used to collect data on the participants' attitudes and habits regarding the usage of *Web 2.0* technologies both in their everyday activities and for learning *ESP* as well as on their *Web 2.0* technology acceptance levels. To get an insight into the application of *Web 2.0* tools for teaching and learning foreign languages in relation to *TAM*, recent studies were searched for

using the key words such as *technology acceptance model*, *Web 2.0 technologies*, *technology enhanced foreign language learning*, etc. Statistical analysis of the data was then conducted with the help of Statistical Package for Social Sciences-17 (SPSS-17) for Windows.

2.1 Literature Review

The literature review shows that *Technology Acceptance Model (TAM)* has recently captured researchers' attention while explaining and predicting the use of *Web 2.0* technologies in foreign language teaching and learning contexts. In their study based on *TAM*, Ramazani *et al.* (2013) examined the role of individual, organisation and social factors in accepting e-learning technology by the English language students. The findings of their study corroborate that both individual and social factors affected the study participants' perceived usefulness and perceived ease of use. However, the results also indicated a lack of effect of organisational factors on the respondents' perceived usefulness and perceived ease of use of technologies. The study conducted by Cakir and Solak (2014) was aimed to understand the attitude of Turkish *EFL* learners towards technology used in a course of English and to determine the role of these factors in regard to academic achievement. It was established that anxiety towards e-learning had a negative effect on academic achievement, whereas perceived ease of use, attitude, satisfaction and self-efficacy have a positive effect on it. These findings also indicate that Turkish *EFL* learners had a positive attitude towards technology and were ready to make a decision to adopt or reject it.

Yu-Li Chen (2014) used new and functional technologies to enhance productivity and to effectively reconstruct the curricula in order to meet *ESP* students' needs and expectations. The study was basically focused on combining both technology and curriculum design. A virtual reality learning environment was created to enhance student learning, and data on their perception towards the courseware were collected after 3 months of its usage. The results suggest that the students were indeed affected by their self-efficacy and technological acceptance.

In her study Yea-Ru Tsai (2015) illustrated a teaching model that utilises a *Blackboard (Bb)* course management system (*CMS*) to support English writing instruction. It was implemented in a blended English research paper writing course, with specific learning resources and activities offered inside and outside the *Bb CMS*. The results of the survey showed that most students displayed positive learning outcomes, indicating that the instruction model could contribute to the effectiveness of learning English writing. The major factors influencing the improvement of their writing performance were technical support, perceived usefulness, perceived ease of use, and learners' attitude, however, the influence of writing activities on the *Bb* was limited.

Tarhini *et al.* (2015) conducted their study to understand the factors that affect the adoption of *Really Simple Syndication* (RSS) feeds on a *Blackboard* learning environment using *TAM*. The results of the structural model showed that perceived ease of use was not found to be a significant predictor of perceived usefulness and attitude. However, perceived usefulness had a direct positive effect on both the learners' attitude and behavioural intention towards using RSS feeds on the *Blackboard* environment. Moreover, the learners' attitude had a direct effect on their intention to use RSS. These results yielded practical and theoretical insights that could be helpful for university policy makers and also for academics.

Thus, quite a number of publications by foreign authors are available on the application of *Web 2.0* for teaching and learning foreign languages with regard to *TAM*, however, as far as our knowledge is concerned, in Lithuania *TAM* has been researched only within the spheres of marketing or electronic commerce. For example, Karčiauskaitė (2012) created a plan to influence a consumer in the technological innovation adoption process. She examined the concepts of innovation, classification, adoption models (including *TAM*) and barriers that interfere in the adoption process. The researcher discussed innovation paradoxes and consumer behaviour strategies, analysed the results obtained from a questionnaire completed by consumers of photographic equipment, as well as determined the key factors affecting consumer behaviour while adopting technological innovation. Pabedinskaitė and Šliažaitė (2012) carried out the analysis of consumers' behaviour patterns in the electronic commerce highlighting the main factors affecting consumers' decision to buy, and explored their attitude towards purchasing over the Internet. The researchers defined the relationship between purchasing on the Internet and the factors that determine e-consumers' decision to buy.

As no previous studies focusing on the use of *Web 2.0* tools in a foreign language educational setting in Lithuania have been found, this investigation is one of the first in the field.

3. The Setting, Participants and Research Instrument

This present investigation was conducted at Mykolas Romeris University, Lithuania in the first semester of academic year 2014–2015 and 65 male (35.6%) and 36 female (64.4%) students from 4 different faculties were the study participants (Table 1). The sampling technique employed was a convenience sample and the selection of respondents was based on the following criteria: all of them were first year full-time undergraduate students enrolled in a compulsory 6 ECTS credit “*English Language for Specific Purposes*” course (face-to-face delivery mode) and were assumed to be computer-literate.

Table 1. Demography of students classified by faculty, study programme and gender (N=101)

Faculty	Study Programme	Students		Male		Female	
		(%)	(N)	(%)	(N)	(%)	(N)
Faculty of Law	Law	22.8	23	35.6	36	64.4	65
	Law and Management	16.8	17				
Faculty of Politics and Management	Organisational management	9.9	10	35.6	36	64.4	65
	Public Administration	23.8	24				
Faculty of Economics and Finance Management	Financial Accounting	13.9	14	35.6	36	64.4	65
Faculty of Social Technologies	Communication and Creative Industries	12.9	13				

The research instrument used for this study was a questionnaire which was distributed among 101 students. All questionnaires were hand-delivered and collected upon completion by the researchers themselves. Before filling the questionnaire in, the participants were briefed about the nature and the purpose of the survey and given instructions on completing the form. Relying on the principles of anonymity, confidentiality and privacy explicit assurance was given that the collected data will not be linked back to individuals and no individual responses would ever be disclosed. The students were also instructed that no highly personal issues or potentially sensitive matters would be explored, and they were free to withdraw from the survey without providing a reason if at any time they became uncomfortable. Having completed the questionnaires, all the respondents were given thanks and provided contacts of the researchers for pertinent questions about the study. The language used in the questionnaire was Lithuanian.

The questionnaire consisted of three sections with a total of 30 questions. The opening section introduced the respondents to the topic, informing that the present survey was designed to analyse their attitude towards applying *Web 2.0* technologies for learning *ESP* at Mykolas Romeris University. The second section included 11 close-ended questions on the respondents' demographic data such as their gender, faculty, study programme, the English language proficiency level, frequency of use and the experience of using *Web2.0* tools, etc. The third section incorporated 19 close-ended items related to the *TAM* model in terms of awareness, perceived usefulness, perceived ease of use, attitude, behavioural intention and actual usage. The participants' responses within this part were based on a five-point Likert-type scale ranging from *strongly agree* to *strongly disagree*. The third section of the research instrument was adapted from Arshad, Tan & Hashim (2012).

3.1 Study Limitations

The findings of this investigation should be interpreted in light of some limitations. First, in spite of the fact that an acceptable response rate was achieved, the small sample size of this study does not allow for large-scale generalisations. Second, convenience sampling method was employed. On the one hand, as Farrokhi and Mahmoudi-Hamidabad (2012) state, it is the most common type of sampling in foreign language studies where the only criterion is the convenience of the researcher⁷. On the other hand, “groups chosen by convenience sampling are conducive to self-selection, administrative decision, time of the class, number of the years of exposure and many other polluting influences”⁸.

3.2 Evaluation of the Measurement Model

It is considered that in a study a precise, reliable and valid instrument is an important step to collect required accurate information for that study. Internal validity concerns whether the findings of a study make sense and reflects the reality that it aims to describe and explain, and whether the conclusions are transferable to another research setting.⁹ Therefore, the data from the survey underwent the reliability analysis. *Cronbach Alpha* was used to determine the reliability of the 6 dimensions of TAM where each dimension consists of multi-item variables. Table 2 shows that the internal consistency is significant for all the dimensions as the reliability of all variables ranged from 0.745 to 0.878 and exceeded the minimum of 0.70 as suggested by Pukėnas (2005).

Table 2. Values of Cronbach's Alpha by each dimension of TAM

Dimensions	Number of items	Cronbach's Alpha
Awareness	3	0.850
Perceived Usefulness	5	0.852
Perceived Ease of Use	4	0.874
Attitude	3	0.878
Behavioral Intention	2	0.765
Actual System Usage	2	0.745
Total	19	

7 Farrokhi, F., Mahmoudi-Hamidabad, A. Rethinking Convenience Sampling: Defining Quality Criteria. *Theory and Practice in Language Studies*, 2012, 2 (4): 784. [interactive] [accessed on 04-07-2015] <<http://ojs.academypublisher.com/index.php/tpls/article/view/tpls0204784792/4569>>

8 *Ibid.*

9 Keller, Ch. *Virtual Learning Environments in Higher education- A Study of User acceptance*. Dissertation No. 1114, Linköping Studies in Science and Technology, 2007, p. 109 [interactive] [accessed on 05-08-2015] <<http://www.diva-portal.org/smash/get/diva2:24073/FULLTEXT01.pdf>>

Statistical analysis of the demographic data was used to understand the attitudes and habits of ESP learners regarding the usage of *Web 2.0* technology.

Descriptive statistics of the data retrieved from the third part of the questionnaire was then calculated to identify the respondents' *Web 2.0* technology acceptance levels, and a bivariate correlation analysis was conducted to identify whether individual respondents' background factors may influence the acceptance of *Web 2.0* tools for learning ESP. Thus, it helped to determine the relationships between the respondents' individual background factors and the six core dimensions of TAM. As a result of the normality probability test, *Spearman's* rank correlation was used for the background variables.

4. Results

4.1 Demographic Data Analysis

The analysis of the demographic data revealed a detailed picture of the respondents' background, disclosing their attitudes and habits towards the application of *Web 2.0* tools in their daily life and language learning contexts, providing a glimpse at their daily online activities and unfolding certain information related to the sphere of learning English.

When asked about the number of hours per day spent surfing the Web, the majority of the participants, 64.4% (N= 65) reported they normally spend an average of 3–5 hours online, 23.2% (N= 23) spend an average of 0–2 hours, 8.1% (N=8) spend an average of 6-9 hours, whereas 3.0% (N=5) spent 10 and even more hours per day surfing the Web (Figure 2).

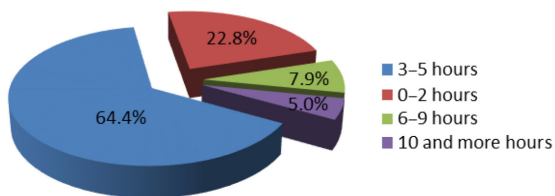


Figure 2. The average of hours students spend online daily

When asked to specify the purposes they use the Web for, it appeared that the most prominent type of online activities carried out by the students is interaction with friends through a typical *Web 2.0* phenomenon of social networking (29.7%, N=30). Using a search engine to find information also features very high on the list of the most frequent online activities among the respondents (17.8%, N= 18). The third most popular online activity was writing e-mails (14.9 %, N= 15), followed by using

the Internet for the learning purposes (9.9%, N=10). Students also use the Web for downloading films and music, shopping, working, playing interactive games, posting comments on the Web, however, for unknown reasons no one seems to be interested in quite a popular a *Web 2.0* tool of blogging (an Internet-based journal or diary in which a user can post a text and digital material while others can comment it) (Figure 3).

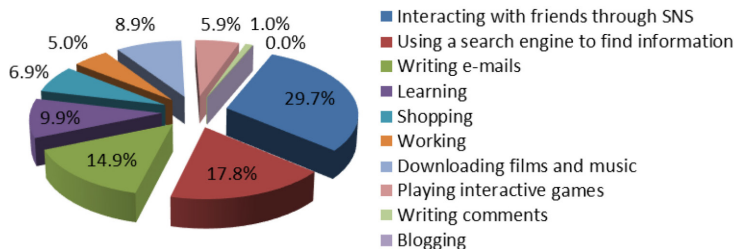


Figure 3. Students' general Internet usage activities

One of the items asked the respondents to evaluate their English language proficiency level (according to *The Common European Framework of Reference for Languages: Learning, Teaching and Assessment*). As Figure 4 shows, the majority of the respondents (61.4%, N=62) identified themselves as independent users, 16.8% (N=17) as proficient users and 21.8% (N= 22) as basic users.

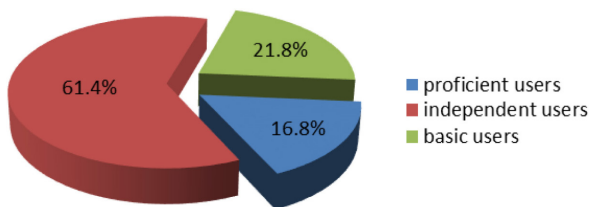


Figure 4. Students' self-evaluations of their English language proficiency level

An interesting finding of the investigation is that in spite of the fact that most of the students consider themselves to be good or very good English language speakers, on a normal basis they tend to use their native language rather than English for browsing the Internet. Figure 5 shows that Lithuanian was the most frequently used language for browsing the Internet among the respondents (63.4%, N= 64). 31.7% (N=32) of the students indicated that they use Russian and only 5.0% (N=5) of them specified that they use the English language.

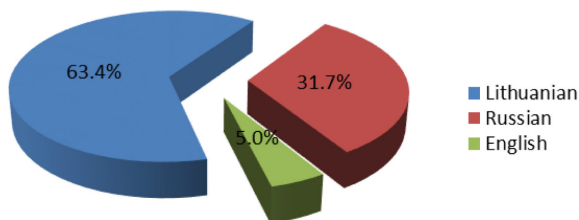


Figure 5. Students' language preferences for online activities

The findings on the students' self-evaluations of their ability to use *Web 2.0* technologies revealed that they exhibited experience with and exposure to different *Web 2.0* technologies. A slim majority (58.4%, N=59) call themselves independent users, 12.9% (N=13) consider themselves to be proficient users, and a total of 28.7% (N=29) think they are basic users (Figure 6).

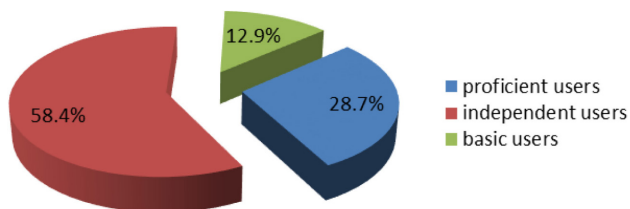


Figure 6. Students' self-evaluations of their abilities to use Web 2.0 tools

Fiorito (2005) states that “as a general rule, while in *ESL* all four language skills: listening, reading, speaking, and writing are stressed equally, in *ESP* it is a needs analysis that determines which language skills are most needed by the students, and the syllabus is designed accordingly. An *ESP* program, might, for example, emphasise the *ESP* concentrates more on language in context than on teaching grammar and language structures. The *ESP* focal point is that English is not taught as a subject separated from the students' real world (or wishes)”¹⁰ When teaching and learning *ESP* at Mykolas Romeris University, which enrolls students from such study programmes as *Law, Law and Management, Organisational Management, Public Administration, Financial Accounting, Communication and Creative Industries*, etc., much attention is being paid to teaching and learning specific vocabulary.

10 Fiorito, L. Teaching English for Specific Purposes (ESP). *Resources for English as a Second Language Online*, 2005. [interactive] [accessed on 07-01-2015] <<http://www.usingenglish.com/articles/teaching-english-for-specific-purposes-esp.html>>.

However, when asked to specify one language learning activity they find the least interesting in their *ESP* classroom, 33.7% (N=34) of respondents reported they did not favour learning professional terminology, 19.8% (N=20) did not like writing activities, 19.8% (N=20) did not like listening, 14.9% (N=15) did not like reading, and 10.9% (N=11) did not favour speaking activities (Figure 7).

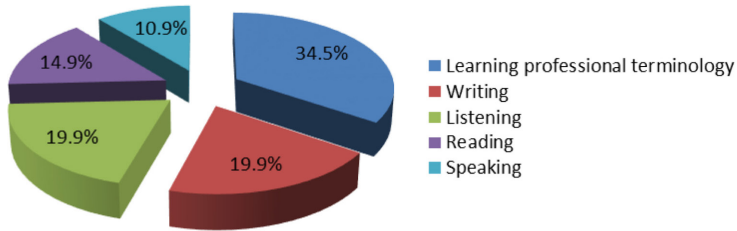


Figure 7. *ESP* learning activities students find least interesting

This implies that certain *Web 2.0* tools could be applied to make these particular language learning activities more attractive for students. For this reason the students were asked to specify which *Web 2.0* applications could potentially be used for learning *ESP*. As Figure 8 shows, four *Web 2.0* tools that have most potential to be applied for learning *ESP* were identified, including *video sharing (YouTube)* (47.5%, N=48), *Social Networking* (20.8%, N=21) *Wikis and collaborative editing tools* (10.9%, N=11) and, interestingly, *Blogging* (9.9%, N=10), although this particular tool was ranked as the least popular among general students’ online activities. *Photo Sharing*, *Podcasting* and *RSS*, typical examples of the canon of *Web 2.0* technologies appear on the bottom line of the list of potentially useful *Web 2.0* applications for learning *ESP*. Only a tiny percent of the respondents reported these *Web 2.0* tools as suitable for applying in *ESP* classes.

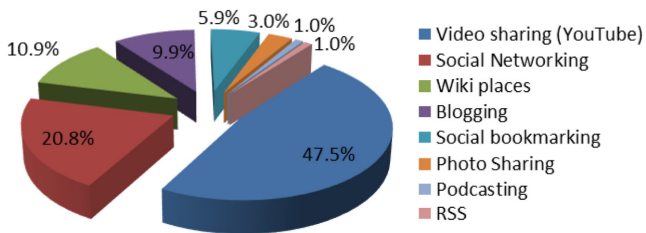


Figure 8. Students’ ratings of potentially significant *Web 2.0* applications for learning *ESP*

When asked to indicate which mode of *ESP* class work they cherish most, a vast majority of the sample (81.2%, N=82) indicated they are in favour of traditional

teacher-student interaction in the classroom, whereas only a marginal amount of 5.0% (N=5) of the respondents reported that they prefer teacher and student interaction through the use of Moodle. 6.9% (N=7) of them prefer student group work, whereas only 3.0% (N=3) of the participants like working at PCs and a total of only 4.0% (N=4) are in favour of individual traditional textbook-based work (Figure 9).

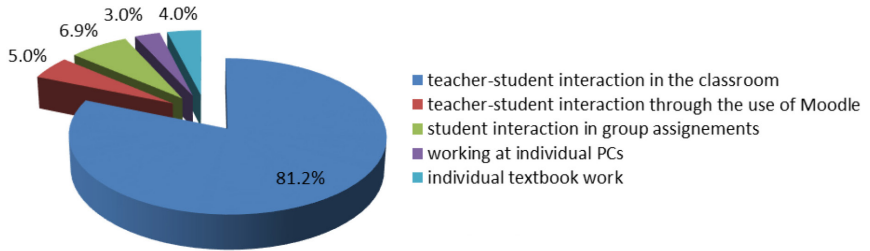


Figure 9. Students' preferences related to ESP classwork

4.2 Descriptive Analysis

Descriptive statistics was used to identify the respondents' Web 2.0 technology acceptance levels. The results (Table 3) implicate that all the respondents rated the items positively within all six dimensions of TAM since the mean scores for all corresponding multi-item variables ranged from 3.35 to 4.2 and were within the upper third of the normative distribution (3-4). The items of all dimensions were ranked basing on the highest until the lowest mean score. The results for the first dimension of TAM (*Awareness*) indicated that the highest mean score (M=4.11, SD=.799) was obtained for item 1 (*I am aware of the existence of Web 2.0 technologies*), whereas the lowest mean score (M=3.92, SD=.845) was received for item 3 (*I am aware that I can learn English language using Web 2.0 technologies*), which means that although the respondents are aware of the virtues of Web 2.0 tools in their daily activities, there is still room for improvement in terms of raising their awareness of applying Web 2.0 tools for ESP learning purposes.

Table 3. Descriptive Statistics for Students' Technology Acceptance Levels (N=101)

Dimensions of TAM and Items	Mean	SD	Rank
Awareness			
1. I am aware of the existence of Web 2.0 technologies	4.11	.799	1
2. I am aware of the usage of Web 2.0 technologies	3.94	.947	2
3. I am aware that I can learn English language using Web 2.0 technologies	3.92	.845	3

Perceived usefulness			
4. <i>Web 2.0</i> technologies can help me to improve ESP reading skills	4.21	.739	1
5. <i>Web 2.0</i> technologies can help me to improve ESP writing skills	3.63	.987	4
6. <i>Web 2.0</i> technologies can help me to improve ESP speaking skills	3.63	1.037	5
7. <i>Web 2.0</i> technologies can help me to improve ESP listening skills	3.97	.866	2
8. <i>Web 2.0</i> technologies can help to enhance my ESP vocabulary	3.77	.882	3
Perceived Ease of Use			
9. Learning English through <i>Web 2.0</i> technology is easy for me	3.58	.875	4
10. It is easy for me to become skilful in using <i>Web 2.0</i> technologies	3.82	.899	3
11. <i>Web 2.0</i> technologies are flexible in interacting and collaborating with peers and instructors	3.89	1.067	1
12. <i>Web 2.0</i> technologies are easy to use	3.88	.962	2
Attitude			
13. <i>Web 2.0</i> technology is useful for my studies	3.99	.818	1
14. The advantage of using <i>Web 2.</i> technologies outweighs the disadvantages of not using it	3.81	.956	2
15. <i>Web 2.0</i> technology is a good strategy in learning English	3.75	.953	3
Intention to Use			
16. I will add <i>Web 2.0</i> applications as another medium to learn English	3.90	.911	1
17. I intend to use <i>Web 2.0</i> technologies to improve my English	3.79	1.003	2
Actual System Usage			
18. I always use <i>Web 2.0</i> technologies to learn English	3.35	1.099	2
19. I believe that using <i>Web 2.0</i> technologies can enhance my language competency	3.81	.987	1

The **Perceived usefulness** dimension, where the respondents were asked to rank the suitability of *Web 2.0* tools for improving different skills of learning *ESP*, shows that the top-ranked item was their attitude that *Web 2.0 technologies can help to improve their ESP reading skills* with the mean score 4.21, followed by their opinion that they might be helpful for improving *ESP* listening skills ($M=3.97$) or enhancing their *ESP* vocabulary ($M= 3.77$), whereas the lowest mean score ($M=3.76$, $SD= 1.01$) was ascribed to item 6 (*Web 2.0 technologies can help me to improve ESP speaking skills*). The results illustrate that *Web 2.0* tools are acceptable and preferred among students for enhancing their *ESP* reading skills and partially support the findings received from the demography section which revealed that reading, listening and vocabulary learning activities in contrast to speaking were rated as least interesting in *ESP* classroom and needed change.

The findings of descriptive analysis for the dimension of **Perceived Ease of Use** reported the highest mean score ($M=3.89$, $SD=1.067$) for item 12 (*Web 2.0 technologies are flexible in interacting and collaborating with peers and instructors*), and the lowest mean score ($M=3.58$, $SD=.875$) for item 10 (*Learning English through Web 2.0 technology is easy for me*), which indicates that although the respondents find Web 2.0 tools acceptable and easy for participatory involvement, collaboration and interactions among users in academic contexts in general, they do not really consider them user-friendly for learning ESP.

The results of descriptive analysis for **Attitude** dimension also reported the highest mean score ($M = 3.99$, $SD = .875$) for item 13 (*Web 2.0 technology is useful for my studies*), and the lowest mean score ($M = 3.75$, $SD = .953$) for item 15 (*Web 2.0 technology is a good strategy in learning English*), and support the findings for *Perceived Ease of Use* dimension: Web 2.0 tools are acceptable among students for academic purposes in general, however, they do not really perceive their educational value in ESP learning contexts.

The results regarding the fifth dimension of **Intention to Use** indicated that the highest mean score ($M= 3.90$, $SD = .911$) was obtained for item 16 (*I will add Web 2.0 applications as another medium to learn English*), whereas the lowest mean score ($M = 3.79$ $SD = 1.003$) was received for item 17 (*I intend to use Web 2.0 technologies to improve my English*). This leads to an optimistic assumption that the respondents plan to incorporate Web 2.0 tools for their language learning in the future.

The results for **Actual System Usage** dimension indicated that the top-ranked item was the students' belief that *using Web 2.0 technologies they can enhance their language competency* ($M = 3.81$, $SD = .987$), while the lowest mean score ($M = 3.35$, $SD = 1.099$) was received for item 18 (*I always use Web 2.0 technologies to learn English*). The latter finding illustrates that not all students use the potential of Web 2.00 technologies to the full in the academic environment, which leads to the assumption that their integration in the ESP course could allow students to make use of their benefits.

4.3 Findings of Correlation Analysis

Correlation analysis was used to identify whether the respondents' individual background factors influence the acceptance of Web 2.0 tools for learning ESP. Thus, the relationship between the students' individual background factors (including gender, an average of hours spent online daily, study programme and the ability to use Web 2.0 tools) and the dimensions of TAM (including awareness, perceived usefulness, perceived ease of use, attitude, behavioural intention and actual system usage) was determined. As Table 4 shows, it was established that the students' ability to use Web 2.0 tools was the only factor which had statistically significant positive relationship with the independent factors of the students' attitude, intention to use, actual system usage and awareness; however, the findings show a medium and low strength of correlation, as all values of the correlation coefficient are below

0.45. The results also show that three grouping variables, namely the respondents' gender, an average of hours spent online daily and their study programme had no statistically significant correlation to any of the independent variables (awareness, perceived usefulness, perceived ease of use, attitude, behavioural intention and actual system usage). These findings prove that the students' acceptance of *Web 2.0* tools for learning *ESP* mainly rests on their ability to use these tools; therefore, this important factor should be taken into consideration before making changes in *ESP* curriculum through the integration of *Web 2.0* tools and planning any educational intervention.

Table 4. Correlation Analysis

Variable	q_1	q_2	q_3	q_4	q_5	q_6	q_7	q_8	q_9	q_10
Awareness (q_1)	1,000									
Perceived usefulness (q_2)	.462**	1.000								
Perceived Ease of Use (q_3)	.538**	.586**	1.000							
Attitude (q_4)	.511**	.628**	.598**	1.000						
Behavioral Intention (q_5)	.470**	.624**	.636**	.687**	1.000					
Actual System Usage (q_6)	.488**	.550**	.645**	.720**	.758**	1.000				
Gender (q_7)	.054	.055	.185	.106	.025	.191	1.000			
An average of hours spent online daily (q_8)	.122	.041	.135	.103	.056	.037	.096	1.000		
Study programme (q_9)	.046	.171	.014	.017	.150	.071	-.060	.022	1.000	
Ability to utilize Web 2.0 tools (q_10)	.398**	.179	.394**	.273**	.270**	.279**	-.141	.138	-.111	1.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Values in bold denote significant correlations.

Discussion and Conclusion

The objectives of this study were to understand the attitudes and habits of *ESP* learners regarding the usage of *Web 2.0* technology, to establish their *Web 2.0* technology acceptance levels and to identify whether the respondents' individual

background factors may influence acceptance of *Web 2.0 tools* for learning *ESP*. The theoretical basis of the current research was *Technology Acceptance Model*.

The overall findings of the research reveal that the surveyed students can be considered to be typical representatives of the so called digital natives generation, i.e. people who were born in the last decades of the 20th century and who “have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age”¹¹. As it is common to all the speakers of “the digital language”, the respondents exhibit experience with and exposure to different *Web 2.0* technologies: the majority of them identify themselves independent or even proficient users of *Web 2.0* tools. They normally spend an average of 3-5 hours online and the majority of this time is spent on their interaction with friends through a typical *Web 2.0* phenomenon of *social networking*. This finding supports the idea that young people’s online habits around the world are very much alike. For example, Richter (2013) claims that according to the *Society for Consumer Research (Gesellschaft für Konsumforschung, GfK)* data, social networking takes up the most of Americans’ online time. On average, Americans spent 37 minutes per day using the services such as *Facebook*, *Twitter* or *LinkedIn*. In this investigation the *social networking* tool together with *video sharing*, *Wikis* and *Blogging* was ranked as having most potential to be applied for learning *ESP*, especially professional terminology.

However, an interesting discovery was made that the majority of participants seem to prefer the virtues of traditional teacher-centred *ESP* classes to teacher-students interaction online. These findings support McCain’s and Jukes’ (2001) comforting assumption that “educators must get over an idea that technology will replace them. Any teacher that can be replaced by a computer absolutely deserves to be, because they just do not get it”.¹² Thus, the hybrid model (a combination of various media and face-to-face instruction) should be taken into consideration when planning a technology-enhanced *ESP* course.

An unusual finding of the investigation was that in spite of the fact that most of the students consider themselves to be good or very good English language speakers, on a normal basis they tend to use their native language rather than English for browsing the Internet. This discovery might seem contradictory as the English language is usually seen in its role as the *de facto* predominating language of Internet users around the world. However, it is in line with the findings of the survey “*User Language Preferences Online (Flash No 313)*” conducted by *The Flash Eurobarometer* in 2011, which revealed that “9 in 10 Internet users in the EU said that, when given a choice of languages, they always visited a website in their own language and only

11 Prensky, M. *Digital Natives, Digital Immigrants. On the Horizon, NBC University Press*, 2001, 9 (5): 1 [interactive] [accessed on 07-01-2015] <<https://edorigami.wikispaces.com/file/view/PRENSKY+-+DIGITAL+NATIVES+AND+IMMIGRANTS+1.PDF>>

12 McCain, T., Jukes I. *Windows on the Future: Education in the Age of Technology*. Corvin Press, 2001, p. 104.

a slim majority (53%) would accept using an English version of a website if it was not available in their own language”.¹³ Moreover, Tagg (2015) claims that “Internet surveys tend to rely on website material (rather than email or online chat) and assume that they will be written in one language which can then be ‘counted’. When we look away from these relatively static, formal sites and towards real-time, informal chat-based spaces such as *Skype* chat and instant messaging, we find users drawing on various resources, from various languages, that defy straightforward categorization”.¹⁴

The participants of the survey were also asked to rate their technology acceptance and usage of *Web 2.0* technologies. The results show that all the respondents rated the items positively within all six dimensions of *TAM*. They are all aware of the existence of *Web 2.0* technologies and find them acceptable for academic purposes in general, especially for participatory involvement; however, their technological acceptance levels of *Web 2.0* for learning *ESP* are moderately lower. Still, when asked to rank their suitability for improving different skills of learning *ESP*, it appeared that they foresee the usefulness of *Web 2.0* in improving their *ESP* reading, listening and writing skills. Therefore, they might add *Web 2.0* applications as another medium to learn English as these tools can enhance these language skills.

The investigation was based on the assumption that students’ gender, an average of hours they spend online daily, their study programme and their ability to use *Web 2.0* tools may have an impact on their acceptance of *Web 2.0* tools for learning *English for Specific Purposes* as suggested by *TAM*. However, the findings of the investigation revealed that only their ability to use *Web 2.0* tools had significant correlations to *TAM* dimensions, i.e. the students’ ability to use *Web 2.0* tools was the only factor that had positive not very strong, but statistically significant relationships with their attitude, intention to use, actual system usage and awareness of *Web 2.0* tools meant for learning *English for Specific Purposes* at the university.

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UNIVERSITETO STUDENTŲ NUOMONĖ APIE ANTROSIOS KARTOS SAITYNO TECHNOLOGIJŲ NAUDOJIMĄ PROFESINĖS UŽSIENIO KALBOS STUDIJOSE. ŽVALGOMASIS TYRIMAS.

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Santrauka. Nuo 2004 m., kuomet O'Reilly Media organizuotoje konferencijoje pirmą kartą buvo pavartotas terminas „antrosios kartos saitynas“, tyrėjai pradėjo domėtis saityno įrankių – socialinių tinklų, tinklaraščių, vikių, YouTube, ir pan. – pritaikymo galimybėmis įvairiose srityse, įskaitant ir ugdymo sektorių. Šio tyrimo tikslas – nustatyti Mykolo Romerio universiteto I kurso nuolatinių studijų studentų nuomonę ir įpročius, susijusius su antrosios kartos saityno įrankių naudojimu bei iširti veiksnius, darančius įtaką jų pasirinkimams naudotis arba nesinaudoti vienu ar kitu saityno įrankiu profesinės užsienio kalbos studijose. Darbe taikyti šie tyrimo metodai: mokslinės literatūros analizė, anketinė apklausa bei aprašomojo pobūdžio statistiniai metodai. Konstruojant tyrimo instrumentą, vadovautasi F.D.Davis sukurtu Technologijų Įsisavinimo Modeliu, kuris aiškina ir prognozuoja vartotojų elgesį, atsižvelgiant į informacinių technologijų priėmimą, remiantis šešiais kriterijais: informuotumu, suvokiama nauda, suvokiamu naudojimo paprastumu, požiūriu, ketinimu naudoti ir naudojimu.

Išanalizavus gautus rezultatus nustatyta, kad tyrimo dalyviai yra tipiški „skaitmeninio pasaulio čiaabuvių kartos“ atstovai, save įvardijantys įgudusiais saityno įrankių vartotojais, internete kasdien praleidžiančiais po 3–5 valandas. Didžiąją šio laiko dalį jie skiria socializacijai socialiniuose tinkluose, kurie drauge su YouTube, vikiais ir tinklaraščiais tyrimo dalyvių buvo pripažinti kaip labiausiai taikytini saityno įrankiai mokantis profesinės užsienio kalbos, ypačingai profesinės terminologijos. Visgi, kaip bebūtų keista, profesinės užsienio kalbos studijose studentai labiausiai vertina ne dėstytojo ir studento bendravimą skaitmeninėje aplinkoje ar individualų darbą prie kompiuterio,

bet tradicinę mokymo(-si) aplinką. Tyrimas remiasi nuostata, jog individualūs veiksniai, tokie kaip studentų lytis, valandų skaičius praleidžiamas naršant internete, studijų programa bei gebėjimas naudotis antrosios kartos saityno technologijomis, gali turėti įtakos technologijų priėmimui mokantis profesinės užsienio kalbos. Koreliacinės analizės rezultatai parodė, kad nei vienas individualus veiksnys, išskyrus studentų gebėjimą naudotis antrosios kartos saityno technologijomis, nėra statistiškai reikšmingai susijęs nei su vienu iš šešių technologijų priėmimo kriterijų. Silpnas, bet statistiškai reikšmingas ryšys nustatytas tik tarp studentų gebėjimo naudotis antrosios kartos saityno technologijomis ir šių nepriklausomų kintamųjų: informuotumo apie technologijas, požiūrio į jas, ketinimo naudoti ir realaus jų naudojimo. Taigi, prieš integruojant vieną ar kitą antrosios kartos įrankį į profesinės užsienio kalbos studijas, rekomenduojama atsižvelgti į studentų gebėjimą naudotis šiuo įrankiu, informuotumą, jų požiūrį naujovės atžvilgiu ir kt. Pasirinkus išbandyti technologinę naujovę, susiformuoja nauja patirtis. Jei šią patirtį studentai įvertins teigiamai, jie gali nuspręsti ir toliau naudoti naują įrankį. Neigiama patirtis, susidūrimas su tam tikrais barjeriais gali sumažinti studentų norą išbandyti bei įsisavinti į studijų procesą integruojamas naujoves.

Reikšminiai žodžiai: užsienio kalbų mokymas(-is), profesinės anglų kalbos studijos aukštajame moksle, antrosios kartos saitynas, technologijų priėmimo modelis.

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