

The Comparison of the Opinions of the University Students on the Usage of Blog and Wiki for Their Courses

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ABSTRACT

The purpose of this study was to investigate the use of blogs and wikis as constructive tools in the computer courses of prospective teachers and compare them with respect to perceived usefulness, perceived ease of use, intention, self efficacy, and anxiety. Ninety-two students who were enrolled in various teacher education programs used blog and wiki for their courses. After their experiences with blog and wiki, the data were collected by administering the instrument developed by the researchers. The results showed that students were positive to blog and wiki usage in the teaching-learning process. However they found wiki more useful. Both perceived usefulness and self efficacy variables explain 71% of blog and wiki usage. This value points to a very high and significant correlation. Perceived usefulness has been identified as the variable that could explain intention by itself at the most.

Keywords

Unified theory of acceptance and use of technology (UTAUT), Blog, Wiki

Introduction

In the recent years, the rapid changes of information and communication technologies have brought the innovations in communication and information sharing. These innovations have contributed to further enhance the teaching and learning process in higher education. Time and space problems have eliminated through these changes and communication, interaction and information sharing between individuals have also become easier.

Along with the emergence of the virtual classrooms concept, the prevalence of distance education and increasing use of electronic elements in the traditional classroom, educators are realizing that the interaction have gained importance. Therefore, the new studies that are commonly called social software are needed to improve the student-teacher and student-student interaction. Social software supports the desire of individuals to be pulled into groups to achieve goals (Connell, 2006). Social software refers to applications such as wikis, blogs and social networks, used for sharing multimedia, audio or visual content, as well as text. Social software tools support learning in a variety of ways: sharing of resources, collaborative learning and peer-to-peer learning, also facilitate communication and collaboration between participants by providing awareness. Also it is possible to share the information resources of other users and get feedback. In addition each member's contribution to the work within the group could be shared (Anderson, 2005; Minocha, 2008; Conole & Culver, 2010).

Web 2.0 technologies, such as blog, wiki, podcast, facebook, flickr, RSS are called social software tools in respect to their features. Web 2.0 is a set of internet services which encourage internet users to participate in various communities of knowledge building and knowledge sharing. Web 2.0 also better supports group interaction and fosters a greater sense of community. Web 2.0 encourages more active learning and enables feedback from tutors to learners, this tutor-student interaction leads to further increasing of student motivation (Crook, 2008). Minocha (2008) stated that Web 2.0 seems to match well with modern thinking on educational practice. In particular, it promises learners of new opportunities to be independent in their study and research. Web 2.0 technologies encourage a wider range of expressive capability. They facilitate more collaborative ways of working.

Web 2.0 technologies are part of the changes in information and communication technology. Web literacy improves the base of individuals' skills and it can reach a wider range of users with these applications. Blog and wiki applications improve the teacher and learner's social interaction, their creativity, their ability to express themselves and their high-level thinking skills. They also enable them to configure the information. At the same time weblog and wiki applications allow users to communicate synchronously and work collaboratively. Students can participate

actively in the learning process. Because of these student-centered new technologies, students can work at their own pace and at any time. These applications provide the opportunity to re-use always and everywhere. They also allow peer evaluations (Godwin-Jones, 2003; Huffaker, 2005; Aronsson, 2002).

Many instructors and learners start using Web 2.0 technologies for effective teaching and learning process. The social aspects of Web 2.0 technologies provide a framework for collaborative group learning. The possibilities of Web 2.0 environments, which enable learners to work with evolving content online through reading, writing, editing and communicating require teachers to reshape their approaches. However, according to Dron (2007) there are many ways that social software can fail to address the needs of learners. Therefore he assessed the potential of social software (blogs, wikis, social networking) in educational contexts and focused on the use of these tools for learners. He identifies a set of highly interconnected principles for educational social software that meets the needs of learners. These are: the principle of adaptability (compatibility); the principle of evolvability (unfixed systems); the principle of parcellation (connections between systems should emerge and not be prescribed); the principle of trust (goodwill); the principle of stigmergy (using signs to guide, not constrain); the principle of context (awareness of virtual ecosystems); the principle of constraint (awareness of what is excluded); the principle of sociability; the principle of connectivity (interconnectedness); the principle of scale (where small iterations underpin larger ones). According to the writer, it is likely that social software will be successful in selforganizing for the benefit of learners with adherence to each of these principles.

Blogs and wikis

Blogs (abbreviated from weblogs) are personal web pages which are easy to use. Blogs give opportunity to people to present information on various topics and interact with others without requiring the design information (Sim & Hew, 2010). In the blog platforms, students can follow their own learning process and can log about their reading, learning and working process in their lessons. Students can use blogs to get information from each other or to learn topics which they do not understand. They can also debate on any topics (Namwar & Rastgoo, 2008).

Wiki is a platform that individual groups can work together synchronously on an idea. Wikis refer to collaborative websites that allow users to interact by adding, removing, or editing site content (Mindel & Verma, 2006). Wiki shows structural similarities with the blog page. Even though the blog has a single author, everyone is a writer on wiki pages. On the blog, visitors can send their comments to the author's message, but they don't have the right to change the existing content. However, on the wiki, they can change all the text by page editing options (Altun, 2005). Wikis are useful in educational settings in which they support individual learning, more socially defined search structures and promotion of collaboration through group editing and peer review is supported. They also provide an attainable store for resources (Snelling & Karanicolas, 2008).

UTAUT: Unified theory of acceptance and use of technology

Unified Theory of Acceptance and Use of Technology (UTAUT) was created by Venkatesh, Morris, Davis and Davis (2003). They reviewed large number of theories along with models and selected the appropriate structures in these theories and models. In their study the researchers reviewed user acceptance literature and discussed eight prominent models, compared the eight models and their extensions, formulated a unified model that integrates elements across the eight models, and empirically validated the unified model. The purpose of this unified model is to identify the behavioral intention putting the factors such as the gender, age, experience, and voluntariness of use among the variables such as performance expectancy, effort expectancy, social influence, and facilitating conditions which affect user acceptance and usage (Venkatesh et al., 2003).

The researches are based on this model observed that the previous models explain 40% of users' acceptance of the technology, UTAUT explains approximately 70% of users' acceptance of the technology. Venkatesh et al. (2003) stated that UTAUT explains as much as 70% of the variance of usage intention with the long-term studies. Researchers find three variables which are performance expectancy, effort expectancy, and social influence have an effect on technology usage intention with this model.

Literature review

The related variables of this research (UTAUT, blog, wiki) and the studies which examined the relationship between these variables are included in this section of the research.

Web 2.0 social software tools, blog and wiki

Minocha (2008) examined the use of social software in enhancing student learning and engagement. She found that social software tools support a variety of ways of learning: sharing of resources, collaborative learning, problem-based and inquiry-based learning, reflective learning and peer-to-peer learning. Students gain transferable skills of team working, negotiation and communication, individual and group reflection, and managing digital identities. Ajjan and Hartshorne (2008) researched the university students' adaptation of Web 2.0 tools. In their study, findings indicated that some faculty members feel that some Web 2.0 technologies could improve students' learning, their interaction with faculty and with other peers, their writing abilities, and their satisfaction with the course.

The review of the Web 2.0 researches, showed that Web 2.0 tools provide an active participation to the process of learning and can be used effectively in the individual and collaborative learning environments. Therefore there is a need to investigate the opinions about the usage of Web 2.0 tools. In addition, blog and wiki has come more to the forefront in the researches about Web 2.0 tools.

Masek and Hingston (2007) examined the use of wikis and blogs in aiding group work for a large and diverse student-based team. In this study, students using these tools for the completion of assignments gave a high rate for the flexibility to work anywhere with an internet connection. Data was obtained by keeping log statistics and questionnaires which were coordinated for receiving feedback about the blog and wiki tools. The results suggested that the flexibility of these tools provides more motivation for students. While blogs are time based, with separate chronologically ordered entries not designed for future editing, wikis are completely free in their formats.

Williams and Jacobs (2004) indicated that blogs are personal online diaries. Their research explored the potential of blogs as learning spaces for students in the higher education sector. Their research showed that blogs have the potential to be a transformational technology for teaching and learning, also provide more communication and interaction between students. According to Yang (2009) blog is a platform that provides students' critically reflect on their learning processes and help their professional growth. Blog was used by the participants as a discussion space in this study. Participants can get more opportunities to make comments, challenge each other's point of view and learn from each other by using blog platform.

According to Su and Beaumont (2008) wiki technology has enabled a new form of online communication. Moreover wikis can help provide an efficient, flexible, user friendly and cost-effective interface for collaboration, knowledge creation and archiving, and student interaction. Wikis provide freedom of authoring and editing for any user. In their research, students constructed literature reviews in the wiki, with peer and tutor review of contributions. The analysis of their study showed that the wiki learning environment has enhanced students' learning, provide quick feedback from tutors, other users and active peer interaction. Majchrzak, Wagner and Yates (2006) stated that users attained three main types of benefits from wikis: enhanced reputation, work made easier, and helping the organization to improve its processes. Users could be categorized as "synthesizers" and "adders" in accordance with their variety of contributions. Synthesizers' frequency of contribution was affected more by their impact on other wiki users, while adders' contribution frequency was affected more by being able to accomplish their immediate work. Also they indicated that synthesis of the knowledge is as important as adding the knowledge.

According to the studies carried out in this field, it can be said that flexibility of using wiki and blog increases the users' interest and motivation. Wikis have an active role in the configuration of information process, they support the collaborative learning environment and they are mostly preferred for cooperative works. Blogs are the critical reflection platforms where the students can often feel themselves relaxed and also make contact with each other.

Blog, wiki and unified theory of acceptance and use of technology

Koca and Usluel (2007) examined teachers' usage of information and communication technology as reflected in Venkatesh et al. (2003) variables of UTAUT. They also investigated teachers' perceptions of information and communication technology (ICT) in relation to their intention to use computer. The purpose of their study was to focus on more effective ways to use ICT in schools. "Information and Communication Technology Acceptance and Usage Scale" was developed for data collection. Principal component analysis was used for construct validity of the scale. According to the principal component analysis results, 34 items were gathered under 8 factors. These were 1) intention 2) perceived usefulness 3) perceived ease of use 4) anxiety 5) social impact 6) self efficacy 7) facilitating conditions 8) voluntariness. These eight factors explained 73.73% of test scores. The score of Cronbach's α coefficient was calculated as 0.91. Teachers' perceived usefulness, perceived ease of use, social factors, and self efficiency have significant effects on intention to use ICT.

Huang, Yoo and Choi (2008) examined the relationship between the level of using Web 2.0 tools (blog, wiki, facebook, youtube, skype, second life) and learning styles of university students. Researchers developed a measurement tool according to the UTAUT in order to determine the level of using Web 2.0 tools. At the end of the research many students found Web 2.0 tools easy to use. Liu (2006) investigated the wiki's future to understand its development. The research was based on investigation of behavior of wiki users and provided useful suggestion for future research and practical usage. The research was based on UTAUT. The researcher investigated wiki users' acceptance behavior, through valid questionnaires. The results showed that performance expectancy, effort expectancy, facilitating conditions, and user involvement have positive effects on wiki users' intention of use. Social influences have no significant effect on wiki users. User involvement has the most significant effect on wiki users' intention of use. The researcher explained that the results might be utilized for future wiki system development suggestions to improve on its usability and adaptability.

The results of the researches showed that unified model explains the usage of technology intention substantially. It is observed that perceived usefulness and perceived ease of use come to the fore in related studies with UTAUT.

Research questions

Nowadays, there is an increasing interest in using blog and wiki, in teaching-learning process. Despite having great benefits in many ways, the differences between blog and wiki need to be investigated. Researches have shown that while the blog has been used for more personal purposes, the wiki has been used more for group purposes (Gunawardena et al., 2009; Parker & Chao, 2007; Masek & Hingston, 2007; Godwin-Jones, 2003). Differences between blog and wiki also reveal of their usage. Therefore, a comparative review of these two new social software tools is important with respect to perceived usefulness, perceived ease of use, intention, self-efficacy, and anxiety. Moreover, this research includes the relationship between blog and wiki usage intention.

This is one of the few researches which analyses together these two important and new social software tools: blog and wiki. The research is also very important for providing a comparative perspective about these tools. In this study the research questions were:

- i. Is there a difference between blog and wiki in terms of perceived usefulness, perceived ease of use, intention, anxiety and self efficacy ?
- ii. Do perceived usefulness, perceived ease of use, anxiety, and self-efficacy variables predict the blog's usage intention in a significant way?
- iii. Do perceived usefulness, perceived ease of use, anxiety, and self-efficacy variables predict the wiki's usage intention in a significant way?

Methodology

Research design

This study compared blog and wiki in terms of perceived usefulness, perceived ease of use, intention, self efficacy, anxiety and examined the intentions of usage. Casual-comparative research model was used in this study. Data were

collected through Personal Information Survey, Blog Acceptance and Usage Scale and Wiki Acceptance and Usage Scale.

Participants

Data collection process of the study was carried out in two stages. The first stage is the validity and reliability studies of the data collection tools, namely, "Wiki Acceptance and Usage Scale" and "Blog Acceptance and Usage Scale". The validity and reliability analysis of the scales were performed on a sample of 77 blog users and 51 wiki users who had used these tools in their lessons before.

After the validity and reliability studies of measuring tools, the research group was determined of 92 students from departments of Turkish Language Education, Elementary Mathematics Education, Early Childhood Education and Mixed Group students of Foundation University. Thirty students from departments of Turkish Language Education, 26 students from departments of Elementary Mathematics Education, 25 students from departments of Early Childhood Education and 11 students from departments of Mixed Group participated to the research.

Thirteen percent of the participants men, 87 percent women in a total of 92 students participated to the research. Demographic characteristics of the research group were examined by looking at their computer usage experience, duration of computer usage and blog-wiki usage status. Nine percent of the students stated that they were beginners, 87% said that they were at the intermediate level, and 4% said that they were advanced users. In response to a question as to how long they had been using computer, 3% said less than 1 year, 14% reported 1–3 years, 24% said 4–6 years, and 59% said more than 6 years. Seventy five students expressed that they were not able to use blog and 80 students expressed that they were not able to use wiki before.

Study procedure

First of all, blog and wiki platforms have been installed on the server of the university under the wordpress application.

In Computer II course blog applications were completed in two weeks and wiki applications were completed in three weeks. Between blog and wiki applications, two weeks break was given. Implementation process was carried out in parallel at all departments.

First, the trial platforms were created for the students to provide equal knowledge level and create basic knowledge about blog and wiki. A few implementations were realized on these trial platforms. Then in the blog platform, the students discussed on the subjects of "Positive and negative effects of computers and internet on children and young people" and "Advantages and disadvantages of computer based education". All classes discussed amongst themselves. However, all discussions were followed by individual students as well. Thus, a small discussion platform was created for the Faculty of Education. After the blog application, all classes selected a unit title within their own courses and created content on wiki platform by working in groups of 3–4 persons. However, all content creation works were followed by students as a group. Thus, a small encyclopedia was created for the Faculty of Education.

The process of discussion on blog platform lasted two weeks and the process of content creation on wiki platform lasted three weeks. The scales administered after the treatment.

Instruments

Personal Information Survey

Scale includes a total of nine questions about the gender of participants, their departments, their classes, their computer using time, and their computer using experience. Personal information form was applied to the students before the other scales.

Blog Acceptance and Usage Scale-- Wiki Acceptance and Usage Scale

7-point Likert-type scales (Blog Acceptance and Usage Scale, Wiki Acceptance and Usage Scale) ranging from 1 (strongly disagree) to 7 (strongly agree) were used in this study. These scales were adapted from the “Internet and Communication Technologies Acceptance and Usage Scale” which was developed by Koca and Usluel (2007), based on the Technology Acceptance and Usage Model which was developed by Venkatesh et al. (2003).

For the reliability evidences of the scales and their dimensions, Cronbach’s α coefficients were calculated which can be seen in Table 1 and Table 2. The coefficients for Blog Acceptance and Usage Scale’s each dimensions were 0.82 for perceived usefulness, 0.81 for perceived ease of use, 0.86 for intention, 0.79 for anxiety, 0.50 for social effect, 0.58 for self-efficacy, 0.45 for facilitating conditions (Table 1) and for Wiki Acceptance and Usage Scale’s each dimensions was 0.80 for perceived usefulness, 0.85 for perceived ease of use, 0.80 for intention, 0.70 for anxiety, 0.50 for social effect, 0.71 for self-efficacy, 0.49 for facilitating conditions (Table 2).

Table 1. Blog Acceptance and Usage Scale Reliability Analysis Results

Dimensions	Number of Items	Cronbach’s α (92 participants)
Perceived usefulness	5	0.82
Perceived ease of use	4	0.81
Intention	5	0.86
Anxiety	3	0.79
Social effect	3	0.50
Self-efficacy	3	0.58
Facilitating conditions	3	0.45

Table 2. Wiki Acceptance and Usage Scale Reliability Analysis Results

Dimensions	Number of Items	Cronbach’s α (92 participants)
Perceived usefulness	5	0.80
Perceived ease of use	4	0.85
Intention	5	0.80
Anxiety	3	0.70
Social effect	3	0.50
Self-efficacy	3	0.71
Facilitating conditions	3	0.49

As shown on the tables, “Social Effect” and “Facilitating Conditions” dimensions were kept outside of data analysis, because their α values are smaller than 0.60 in both scales.

Data analysis

In data analysis section descriptive statistics, dependent samples t-test and stepwise multiple regression analysis were used. In this study, the level of significance was taken as 0.01 because of multiple t-tests.

Findings

The statistics of scores which were calculated for each variable of “Blog Acceptance and Usage Scale” and “Wiki Acceptance and Usage Scale” are shown at Table 3.

Table 3. The statistics about each variable of Blog and Wiki Acceptance and Usage Scale

Blog	N	Min	Max	Mean	Std. Deviation
Perceived usefulness	92	9	35	24.09	5.753
Perceived ease of use	92	10	28	21.09	4.729
Intention	92	8	35	24.09	6.187
Anxiety	92	3	20	8.28	4.512

Self-efficacy	92	5	21	13.37	3.726
Wiki					
Perceived usefulness	92	14	35	27.23	5.036
Perceived ease of use	92	13	28	22.14	4.349
Intention	92	12	35	25.40	5.239
Anxiety	92	3	20	9.75	4.359
Self-efficacy	92	4	21	14.26	3.905

Comparison of blog and wiki

“Is there a difference between blog and wiki in terms of perceived usefulness, perceived ease of use, intention, anxiety and self-efficacy?”

Dependent samples t-test was used to determine whether there is a difference between blog and wiki in terms of perceived usefulness, perceived ease of use, intention, anxiety and self-efficacy (Table 4).

Table 4. The descriptive statistics and t-test results of perceived usefulness, perceived ease of use, intention, anxiety and self-efficacy variable scores

Variable	N	\bar{X}	SS	t-test			d
				SD	t	p	
Perceived usefulness (Blog)	92	24.09	5.753	91	5.411	.000	.563
Perceived usefulness (Wiki)	92	27.23	5.036				
Perceived ease of use (Blog)	92	21.09	4.729	91	2.121	.037	.220
Perceived ease of use (Wiki)	92	22.14	4.349				
Intention (Blog)	92	24.09	6.187	91	2.355	.021	.244
Intention (Wiki)	92	25.40	5.239				
Anxiety (Blog)	92	8.28	4.512	91	3.233	.002	.337
Anxiety (Wiki)	92	9.75	4.359				
Self-efficacy (Blog)	92	13.37	3.726	91	2.122	.037	.220
Self-efficacy (Wiki)	92	14.26	3.905				

The difference between the scores of blog and wiki's perceived usefulness variable was found significant ($p < .001$). The average of wiki's perceived usefulness scores was calculated as 27.23, while the average of blog's perceived usefulness scores was 24.09. Effect size of the study (Cohen's d) was .563. This value indicated a medium level of effect size according to the Cohen's Standard. It can be confirmed that the students found wiki more useful than blog.

The difference between the scores of blog and wiki's perceived ease of use variable was not found significant ($p = .037$). The average of wiki's perceived ease of use scores was calculated as 22.14, while the average of blog's perceived ease of use scores was 21.09. Effect size of the study (Cohen's d) was found .220.

The difference between the scores of blog and wiki's intention variable was not found significant ($p = .021$). The average of wiki's intention scores was 25.40, while the average of blog's intention scores was 24.09. Effect size of the study (Cohen's d) was .244.

The difference between the scores of blog and wiki's anxiety variable was significant ($p = .002$). The average of wiki's anxiety scores was 8.28, while the average of blog's anxiety scores was 9.75. Effect size of the study (Cohen's d) was .337. This value indicated a small level of effect size according to the Cohen's Standard. According to the the obtained findings, it can be stated that although the difference between the scores of blog and wiki's anxiety variable was found significant, the anxiety level of both implementation are low.

The difference between the scores of blog and wiki's self-efficacy variable was not found significant ($p = .037$). The average of wiki's self-efficacy scores was 14.26, while the average of blog's self-efficacy scores was 13.37.

Prediction of blog's usage intention

“Are perceived usefulness, perceived ease of use, anxiety and self-efficacy variables predicting the blog's usage intention in a significant way?”

In this problem, intention was taken as the dependent variable, while perceived usefulness, perceived ease of use, anxiety and self-efficacy were taken as independent variables of Blog Acceptance and Usage Scale. Then multiple regression analysis was utilized. Correlation coefficients between variables are also given at Table 5.

Table 5. Correlation coefficients between variables

Blog	Perceived usefulness	Perceived ease of use	Anxiety	Self-efficacy
Intention	.789	.176	.115	.648
Perceived usefulness		.127	.110	.495
Perceived ease of use			-.402	.505
Anxiety				-.104

When examining the correlation coefficients between variables, the highest relationship found was between intention and perceived usefulness.

Stepwise model was used during the regression analysis. The results of regression analysis about the prediction of the intention of Blog Acceptance and Usage Scale variables are given in Table 6 and Table 7.

Table 6. The results of regression analysis for the prediction of the intention

Model		B	Std. Error	Beta (β)	t	p	Zero order	Partial	
Intention	1	Perceived usefulness	.849	.070	.789	12.182	.000	.789	.789
		Constant	.449	1.639		.274	.785		
	2	Perceived usefulness	.667	.071	.620	9.448	.000	.789	.708
		Self-efficacy	.566	.109	.341	5.193	.000	.648	.482

Note. $R^2 = .710$; $F(2, 89) = 109.096$
 $p < .001$

Table 7. The results of regression analysis for the prediction of the intention

Model	R^2	Adjusted R^2	F	Sig.
1	.622	.618	148.410	.000
2	.710	.704	109.096	.000

Note. 1: Perceived usefulness; 2: Perceived usefulness + Self-efficacy

When the t-test results are examined in accordance to significance of regression coefficients, it is seen that perceived usefulness and self-efficacy are explanatory predictors of blog usage intention. According to the standardized regression coefficient β , the relative order of importance of this two predictor variables on the dependent variable: perceived usefulness and self-efficacy.

Perceived usefulness variable first entered into the model and gave significant results ($p < .001$). Perceived usefulness explains approximately 62% of intention by oneself. Both perceived usefulness and self efficacy variables give very high and significant correlation ($R^2 = .71$, $p < .001$). These two variables explain approximately 71% of blog usage together. Perceived usefulness has been determined as the highest variable that could explain intention by itself between Blog Acceptance and Usage Scale variables.

Prediction of wiki's usage intention

“Are perceived usefulness, perceived ease of use, anxiety and self-efficacy variables predicting the wiki's usage intention in a significant way?”

In this problem, intention was taken as the dependent variable, while perceived usefulness, perceived ease of use, anxiety and self-efficacy were taken as independent variables of Wiki Acceptance and Usage Scale. Then multiple regression analysis was utilized. Correlation coefficients between variables are also given at Table 8.

Table 8. Correlation coefficients between variables

Wiki	Perceived usefulness	Perceived ease of use	Anxiety	Self-efficacy
Intention	.817	.374	-.097	.615
Perceived usefulness		.386	-.060	.536
Perceived ease of use			-.373	.574
Anxiety				-.234

When examining the correlation coefficients between variables, the highest relationship found was between intention and perceived usefulness.

Stepwise model was used during the regression analysis. The results of regression analysis about the prediction of the intention of Wiki Acceptance and Usage Scale variables are given in Table 9 and Table 10.

Table 9. The results of regression analysis for the prediction of the intention

Model		B	Std. Error	Beta (β)	t	p	Zero order	Partial	
Intention	1	Perceived usefulness	.850	.063	.817	13.435	.000	.817	.817
		Constant	1.276	1.661		.768	.445		
	2	Perceived usefulness	.711	.070	.683	10.138	.000	.817	.732
		Self-efficacy	.334	.090	.249	3.695	.000	.615	.365

Note. $R^2 = .712$; $F(2, 89) = 109.796$
 $p < .001$

Table 10. The results of regression analysis for the prediction of the intention

Model	R^2	Adjusted R^2	F	Sig.
1	.667	.664	180.504	.000
2	.712	.705	109.769	.000

Note. 1: Perceived usefulness; 2: Perceived usefulness + Self-efficacy

The t-test results on the significance of regression coefficients showed that that perceived usefulness and self-efficacy are explanatory predictors of wiki usage intention. According to the standardized regression coefficient β , the relative order of importance of these two predictor variables on the dependent variable: perceived usefulness and self-efficacy.

Perceived usefulness variable first entered into the model and gave significant results ($p < .001$). Perceived usefulness explains approximately 67% of intention by itself. Both perceived usefulness and self efficacy variables give very high and significant correlation ($R^2 = .71$, $p < .001$). These two variables explain approximately 71% of wiki usage together.

Results and discussion

The results of the study revealed that when the blog and wiki were compared in terms of perceived usefulness and anxiety, significant differences were found in favor of wiki. However, significant differences were not found when the blog and wiki were compared in terms of perceived ease of use, intention, and self efficacy. The effect size of the perceived usefulness variable is higher than other variables.

The results showed that students were positive to blog and wiki and they found wiki more useful. The results about wiki are more positive probably because wiki is a flexible collaborative platform that can be used continuously. Students can change the content, correct their errors, create their own resources, and produce the material together. Also Mindel and Verma (2006) discovered that use of wikis in an educational setting follows belief in a social (learner-based) construction of knowledge, where learners collaborate and share in the learning process.

When the implementation process is examined, we can see that group work has been done on the wiki platform whereas individual study has been carried on the blog platform. Therefore group work has caused some differences between wiki and blog.

Wikis and blogs contribute to the students' work positively in learning environments. In this study, while blog is used as a content discussion platform, wiki is used as a content development platform within the scope of computer course. Blogs and wikis are two important course content discussion, development and management technologies that enable an interactive engagement amongst students and between students and teachers. Therefore educational possibilities of blogs and wikis should be considered.

Usage of blogs can address some of the theoretical underpinnings that are summarized below (Glogoff, 2005):

- In instructional blogging, as a knowledge centered instructional tool, the instructor designs research activities that engage students in discussions with practitioners.
- In learner-centered blogging, the instructor gives positive feedback to students regarding their comments and by posting comments for discussion.
- For providing community-centered instruction, blogging supports the importance of social and peer interaction. As a receptive learning tool, blogging can encourage students to acquire information from resources and reflect on what they have gathered.
- In a directive learning environment, blogs provide students with equal access to information, to expand students' understanding of specific issues, and to direct students to explore additional material.

Wikis are also very useful tools for educational purposes, since they encourage student participation and also a sense of group community. The educational benefits of wikis can be summarized as follows by Duffy and Bruns (2006):

- Wikis offer an online space for collaborative authorship and writing.
- Wikis are available online for all web users or for members of specific communities, and include version control tools that allows authors to track the history of specific pages, and the history of their personal contributions.
- Using wikis, students can easily create simple websites without prior knowledge or any skill in programming, thus eliminating the time overhead necessary to develop these skills.
- A wiki allows teachers and learners to see the evolution of a written task, and to continually comment on it, rather than offering comments only on the final draft.
- A wiki can also be very useful for tracking and streamlining group projects.

Venkatesh et al. (2003) have expressed in their study that perceived ease of use, perceived usefulness, social effect, and self efficacy have strong effects on intention. In this study, both perceived usefulness and self efficacy variables explain 71% of blog and wiki usage. This value points to a very high and significant correlation. Perceived usefulness has been determined as the highest variable that could explain intention by itself.

According to the students, wiki and blog make their tasks faster, make the process easier, increase their performance and productivity, so that they have more positive views and intentions to use blog and wiki in the future. Therefore perceived usefulness is thought to be the most determining factor. However, wiki's perceived usefulness factor can explain intention by oneself more than blog's perceived usefulness factor. In the implementation process, it can be said that creating content as a group of students have an impact on perceived usefulness.

Some studies has also supported this view. Davis, Bagozzi and Warshow (1989) explained in their studies that perceived usefulness is the most important determinant which influenced peoples' intentions and perceived ease of use had a small but significant effect on intentions as well. Moreover Ma, Anderson and Streith (2005) investigated student teachers' perceptions of computer technology in relation to their intention to use computers. Their study results indicated that student teachers' perceived usefulness of computer technology had a direct significant effect on their intention to use it and student teachers' perceived ease of use had only an indirect significant effect on intention to use computer technology.

Even though the research group's technology experience was limited, most of the results were significant and positive. It can be said that these results are thought to be important for the future of this social software tools such as blog and wiki. Moreover, the usage of blog and wiki was found useful and easy by the students, also their anxiety about using them was very little, so it can be said that this social software tools will become widespread any longer.

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