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### Using Facebook out of habit

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## Using Facebook out of habit

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This article investigates the uses and gratifications of the popular social networking site Facebook. In the exploratory stage, 70 users generated phrases to describe the manner they used Facebook. Interestingly, some users not only described the uses, but also mentioned how they perceive these uses. These phrases were coded into 14 items and clustered into four factors. The principal component analysis that was conducted in the third stage of the study, which was addressed to 222 Facebook users, verified the validity of the four factors: Social Connection, Social Network Surfing, Wasting Time and Using Applications. Previous user studies on Facebook have examined the immediate social effects of this popular social networking site, but they have not regarded emerging uses of the platform, such as gaming and applications, which do have a social component as a feature and not as a core principle. The 'Wasting Time' factor and the growth of 'Using Applications' factor indicate that Facebook has already become an integral part of daily computing routine, alongside with the rest of the entertainment desktop and web applications.

**Keywords:** social network sites; Facebook; uses and gratifications; motivations; perceptions

### 1. Introduction

Social networking sites (SNSs) have become a popular means of organising, growing and maintaining social connections with others. At the same time, the rapid growth and wide adoption of social network sites have spurred scholars' interest in their social impacts (boyd and Ellison 2007, Ellison *et al.* 2007, Steinfield *et al.* 2008, Miller *et al.* 2010). According to boyd and Ellison (2007, p. 211) social network sites are 'web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system'. Human networks have existed throughout history in various forms (clubs, guilds, political parties, etc.). The first social network site was launched in 1997 and currently there are hundreds of them worldwide. One of the largest social network sites among the population is Facebook. Despite the numerous 'success stories' of online networks and communities (e.g. Preece 2001, Çakir 2002, Johnston *et al.* 2011), when Facebook was launched back in February 2004, few people would have predicted the magnitude of its success in the following years. Indeed, by the end of 2011 the numbers that prove its worldwide echo are staggering: 800 million users spend over 700 billion min per month and share more than 30 billion pieces of

content in the same time space (Facebook Statistics 2011). These numbers do not only reveal the degree of Facebook's rapid growth, but an active and vibrant community as well. Then, a worthwhile research question is the behaviour of habitual Facebook users.

In the face of a success story such as Facebook's, an observer could be wondering how do Facebook's features manage to keep so many active by regularly coming back, spending a considerable amount of their time. From the users' point of view, what would their motivations be, so as to use Facebook and what would their behaviour be while using it?

In this study, the three-stage approach adopted by Joinson (2008) and Vasalou *et al.* (2010) will also be implemented. In the first exploratory stage, respondents were asked to list 'why' they use Facebook in an open-response format. In the second stage of the study the results of the exploratory study are clustered by two expert researchers (one psychologist and one Doctor in social networks) based on a pool of gratification items was assembled from prior communication gratifications studies (Flaherty *et al.* 1998, Dimmick *et al.* 2000, Papacharissi and Rubin 2000, Flanagin and Metzger 2001, Leung 2001) and led to the development of a 14-item questionnaire which are clustered into four factors. In the third (confirmatory) stage they subjected to principle component analysis (PCA) to verify the chief (U&G) driving participation

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in Facebook. Especially, in the third stage participants were asked to rate the importance of each item on a scale of 1 (very unimportant) to 7 (very important). To measure and verify the four factors of the 14 items, PCA was conducted. The article is organised as follows. In the next section, we present the background theories and the related work of our study. Section 3 presents the three-stage research methodology as well as the results and the findings. Section 4 discusses the results and the limitations of the study. The last section of the article raises with the conclusions and several ideas for further research in the area.

## 2. Background theory and related work

The U&G theory assumes that media consumers are not passive but take an active role in interpreting and integrating media into their own lives. The theory also holds that users are responsible for choosing media to meet their needs. When a medium fulfils the expected gratifications, this leads to persistent use of the medium (Palmgreen and Rayburn 1979). Katz (1959) provides insight into what motivates continued use of the medium and places more focus on the user, instead of the actual message itself by asking ‘what people do with media’ rather than ‘what media does to people’. The approach suggests that people use the media to fulfil specific gratifications. Although the U&G theory was originally developed in the context of broadcast media (e.g. TV), with the widespread adoption of media, such as online communities, virtual worlds and SNSs, important new research from the U&G perspective is emerging.

Previous research has examined the motives and behaviours that the user seeks to gratify while using Facebook. In particular, Facebook is used and adopted primarily to maintain contact with offline connections rather than to develop new relationships (Lampe *et al.* 2006, Ellison *et al.* 2007). In this study, gratification items from prior communication gratifications studies (Flaherty *et al.* 1998, Dimmick *et al.* 2000, Papacharissi and Rubin 2000, Flanagin and Metzger 2001, Leung 2001) serve as a basis for items identification in the clustering phase. Focusing on social media uses is important because we need to understand what motivates users to switch from one use to another. Moreover, the concurrent use of various tools making an analysis of U&G essential.

Of course, demographic information may not reveal the uniqueness of respondents in terms of their attitudes or how they would have responded to survey items. Moreover, it is not clear whether specific users’ characteristics influence their behaviour to utilise Facebook. Research on media using patterns suggests that, demographic variables influence motives and behaviours

(boyd 2007, Hargittai 2007). Based on the above evidence, it can be inferred that demographic variables may affect Facebook users’ behaviour, as such a distinct need making the analysis of demographics essential.

Several items regarding the user motivations (e.g. social surfing, social browsing) have been identified in online communities (Jin *et al.* 2010), digital TV (Livaditi *et al.* 2003) and social networks (Lampe *et al.* 2006). While these were later essentially confirmed by several researches (Joinson 2008, Sheldon 2008a, Giannakos *et al.* 2010, Vasalou *et al.* 2010), these researches took the study of motivations for the use of Facebook one step ahead, in the present day there are three elements that need to be consider. The first one comes from the fact that, a great number (Facebook Statistics 2011) of applications were – comparatively recently – fused to Facebook’s functionality, as a result of the release of the Facebook developers’ Application programming Interface in May 2007. In their origin they were built around the social network (Facebook), as a purely playful tool to enhance the social experience of Facebook users’ (Rao 2008, Kirman 2010). Examining these applications more carefully, it could easily be noticed that Facebooks’ social games technology is in an embryonic stage due to their short lifetime; however, many of them are being used by tens of millions of Facebook users (Games Statistics 2011), possibly affecting the way they use the platform to a certain extent and their social nature (Kirman *et al.* 2010). The second element, refers to previous research by Lampe *et al.* (2006) who collected ‘opinions and beliefs but not actual behaviours’, something that could mean that the users’ reports of how they use Facebook may ‘differ from their actual behaviour on the site’, hence, making a study adjusted, so as to provide information regarding the user’s actual behaviour and the manner Facebook is perceived by its users nowadays, quite interesting. One last interesting element that should be taken into account is the fact that, while it has been noted that Facebook has become an integral part of its users’ everyday life (Sturzman 2005), the extent of this has not been measured in a quantitative manner. Although several items has been identified and studied in social media, the out of habit behaviour is still needs to be explored.

## 3. Research methodology

As we mentioned earlier, our study is based on the three-stage approach adopted by Joinson (2008) and Vasalou *et al.* (2010). Especially, in the first stage we identified the Facebook uses, afterwards these uses are clustered into 14 items and four factors by two expert raters, following a survey was conducted in order to verify and measure the impact of each factor.

In Table 1, we present a brief description of each stage and the sample which is used.

### 3.1. Exploratory stage

#### 3.1.1. Sampling

Participants were 70 Facebook users who responded to a request to complete a short online study. The sample comprised of 32 males and 38 females (Mean age = 25.6 years), Table 1. Despite the fact that the sample was not chosen in accordance with strict statistical criteria, but rather in a more random manner, those demographics (Table 2) are really close to the actual Facebook users' demographics (Demographics 2010). A number of different methods were adopted for attracting respondents; questionnaires were distributed in various places (universities campus, public areas), e-mails were sent to different mailing lists. The survey was open during the first two weeks of April 2010 at a public university in north-western Greece. The main prerequisite, for an individual to answer the questionnaire, was that, he or she, had to be a Facebook user.

#### 3.1.2. Measures

The questionnaire was split in to three parts. The first part included questions concerning the demographics of the sample (e.g. age, gender). The second part included questions regarding some measures of the use of Facebook (e.g. time spent on site each week, number of friends linked on site, history of use). The third part included questions adopted from Stafford *et al.* (2004 and Joinson (2008)) using free-text entry:

For what reason do you use Facebook today?  
What is the first thing that comes to your mind when you think about what you enjoy most when using Facebook?  
What other words describe what you feel about Facebook?  
What uses of Facebook are most important to you?

### 3.2. Clustering stage

Two evaluators, one psychologist and one social networking expert, clustered all the descriptive answers derived from Facebook users in response to the first question. In the clustered procedure the researchers worked together to resolve differences. All disagreements were resolved by discussion. The procedure was based on a pool of gratification items was assembled from prior communication gratifications studies (Flaherty *et al.* 1998, Dimmick *et al.* 2000, Papacharissi and Rubin 2000, Flanagin and Metzger 2001, Leung 2001) and led to the development of a 14-item questionnaire. The main guidance was to cluster all responses' in order to provide the minimum number of items. Afterwards, the evaluators co-operated in order to develop the four factors, based on the closeness between the responses. In addition, the names of the factors arose from the literature (Table 3) and slightly re-named by the researchers. The clustering process was made directly after the exploratory study (third week of April 2010), that was made because we wanted the exploratory and confirmatory studies to be as close in time as possible, due to the rapid growth of Facebook. As such, in the clustering stage the following items and factors are identified.

The first factor was labelled 'Social Connection', having a clear focus on keeping in touch and reconnecting with lost contacts. The second factor is termed 'Social Network Surfing', so as to signify the ability of users to view information about users that

Table 2. Exploratory stage: users' demographic profile.

Demographic profile	(n = 70)
Gender	
Male	n = 32 46%
Female	n = 38 54%
Number of friends	Mean = 213.29 SD = 148.9
Age	Mean = 25.57 SD = 3.48
Time spent on each week (hours)	Mean = 8.24 SD = 6.63
History of use (years)	Mean = 1.89 SD = 0.82

Table 1. Methodology phases of the research.

Methodology stages	Description	Sample
Exploratory stage	Seventy Facebook users responded to a request and complete a free-text entry short online study. The main purpose of the study was to record all the types of Facebook uses.	Seventy Facebook users
Clustering stage	Two expert raters clustered the descriptive items and phrases developed by Facebook users in the prior exploratory study.	Two expert raters (psychologist and Dr. at social networks)
Confirmatory stage	In the clustering stage 4 factors and 14 items were recognized. In confirmatory stage, we measure and verify the validity and the reliability of these factors.	Two hundred twenty-two Facebook users

Table 3. Frequency of mentions (question 1).

Factors and items ( <i>sample user generated items</i> )	Number of mentions*	Closely related source
Social connection To communicate with people who are away To communicate with people who I have not seen for a long-time Reconnect with people who I have lost contact To see what my old friends do	38	Joinson (2008), Lampe <i>et al.</i> (2007) (As social searching – networking)
Social surfing To see the profiles of people who I do not know To see the profiles of friends of my friends I see pictures of people who do not know	6	Lampe <i>et al.</i> (2006), Lampe <i>et al.</i> (2007) (As social Browsing)
Wasting time To spend my time To kill my time Just for fun From habit	18	Sheldon (2008a) (As passing time)
Using applications I use different Facebook applications Play games I see what applications my friends are using and I try them out	13	Vasalou <i>et al.</i> (2010) (as games and applications)

Note: \*Two responders gave two answers.

are either connected to them indirectly (e.g. friends of their friends), or even total strangers. The third factor was named ‘Wasting Time’. This factor contains items such as ‘spending time’ and ‘just for fun’, that could be indicative of a radical change in the way a number of users view Facebook, not just as another social network, but maybe not surprisingly, as a part of their daily routine. The final factor contains items related to applications within Facebook – with games and quizzes being some of the most popular. In spite of the observed rapid growth in the use of these Facebook applications in the recent years, the related factor ranked third based on the number of mentions.

The factors and the items identified are outlined in Table 3.

In accordance with previous research (Stafford *et al.* 2004, Joinson 2008, Vasalou *et al.* 2010), the factor ‘Social Connection’ was the most rated factor in the present research as well. However, one interesting new element that came to surface, was the impact of the ‘Wasting Time’ factor, which came second, only behind ‘Social Connection’. The factors ‘social surfing’ and ‘Using Applications’ were also recognised in that stage of the research.

### 3.3. Confirmatory stage: measuring of uses and perceptions

#### 3.3.1. Sampling

The research methodology included a survey that was conducted after the process of clustering. Participants

were 222 active Facebook users. A number of different methods were recruited for attracting respondents; questionnaires distributed in various places (e.g. university campus, public areas) and e-mails were sent to different mailing lists. The study was open during the final week in April, throughout May and the first two weeks in June of 2010 at a public university in the north-western Greece. As Table 4 shows, the sample’s composition regarding the gender was approximately equal between men (55.9%) and women (44.1%). In terms of age, the majority of the respondents (49.5%) were between 25 and 34, while the second more frequent age group (35.6%) involved people between 19 and 24. Finally, the great majority of the respondents was graduates and post-graduate students (72.8%), in conjunction the cultural and geographical distinctiveness of the campus ensured surveying a diverse, representative population.

#### 3.3.2. Measures

The questionnaire was split in to two parts. The first part included questions regarding the demographics of the sample (e.g. age, gender, educational level). The second part included questions regarding the four principal factors extracted in study 1. To be more specific, participants were asked to rate, using a 7-point Likert scale, the 14 uses and perceptions derived from Study 1 (Table 5) using the metric, ‘To which degree do you use each of the following Facebook features?’. The scale was anchored at 1 (none) and 7 (very much).



#### 4. Results and findings

In the process of clustering in the second stage, four factors were recognised. In this stage, we aim to verify the validity and the reliability of these factors. Fornell and Larcker (1981) proposed three procedures to assess the convergent validity of any measure in a study: (1) composite reliability of each construct, (2) item reliability of the measure and (3) the average variance extracted (AVE).

First, an analysis of reliability and dimensionality was carried out, in order to check the validity of the scales used in the questionnaire. Regarding the reliability of the scales, Cronbach's (1951) alpha indicators and the inter-item correlations for the items of each variable were used. As one can see in Table 5, the results of the tests showed acceptable

indices of internal consistency in the four scales considered.

In the next stage, we proceeded to evaluate the reliability of the measures. The unidimensionality of the scales developed was evaluated, by carrying out a principal components analysis. The existence of unidimensionality is very important, since it allows the calculation of the average of the indicators that compose each construct. Consequently, it is possible to use a solely factor for representing each theoretical factor. Factorial analysis, with principal components and varimax rotation, was carried out to test unidimensionality of our four scales. Table 5 presents the factor loadings for all variables that were greater than 0.685 with no cross construct loadings, indicating good discriminant validity. Together, the four observed factors accounted for 69.41% of the total variance. The factor analysis identified four distinct factors: (1) Social Connection, (2) Social Network Surfing, (3) Wasting Time and (4) Using Applications (Table 5).

The third step for assessing the convergent validity is the AVE; AVE measures the overall amount of variance that is attributed to the construct in relation to the amount of variance attributable to measurement error (Fornell and Larcker 1981). Convergent validity is found to be adequate when the AVE is equal or exceeds 0.50 (Segars 1997).

Reconnecting with people and maintaining contact with individuals from one's social environment through communication, are the uses that are outlined by the items of the first factor *Social Connection* (see Table 5). With regard to the items concerning maintaining contact, these are focused on people with whom the communication is somewhat

Table 4. Study two users' demographic profile.

Demographic profile	Number	Per cent
Gender		
Male	124	55.9
Female	98	44.1
Marital status		
Single	204	91.9
Married	15	6.8
Divorced	2	0.9
Widowed	1	0.5
Age		
0–18	21	9.5
19–24	79	35.6
25–34	110	49.5
35++	12	5.4
Education		
High school	47	21.2
University	124	55.8
Post graduate	51	23.0

Table 5. Items descriptive statistics and loading.

Factors	Items	Mean	S.D	CR	Loadings	AVE	Variance
Social connection	Communicate with people who are away	4.88	1.68	0.764	0.772	0.58	14.54
	Communicate with people who I have a long time to see	4.81	1.66		0.848		
	Reconnect with people who I have lost contact	4.36	1.69		0.685		
	Finding out what my old friends do	4.21	1.83		0.717		
Social surfing	Looking at the profiles of people you don't know	2.53	1.73	0.853	0.881	0.72	13.42
	Looking at the profiles of friends of my friends	3.10	1.88		0.794		
	Viewing photos of people you don't know	2.61	1.82		0.863		
Wasting time	To spend my time	4.14	1.82	0.836	0.808	0.62	32.20
	To kill my time	3.84	1.92		0.873		
	Just for fun	3.47	1.92		0.718		
	From habit	3.96	1.72		0.730		
Using applications	Using various Facebook applications	3.18	2.17	0.810	0.864	0.68	9.24
	Playing games	2.32	1.59		0.786		
	Trying apps because you see your friends have used them	2.95	1.78		0.829		

Note: Total variance explained = 69.41%.

problematic, because of the distance or the fact that they are not often met. The items concerning reconnecting with people are quite straightforward, from the aspect that Facebook's features enable someone to trace people from his own past.

The second factor, *Social Network Surfing* contains items that describe Facebook's features that enable its users to browse information about people that are not directly connected to them (see Table 5), but on the contrary, they are either total strangers, or people that are somehow related with the individual's contacts.

Factor three, *Wasting Time* is quite interesting, with regard to the way Facebook's users seem to have alternated their motivations for using it and their behaviour while using it. The items contained in this factor reveal, the extent to which Facebook has become a part of their everyday life, especially when it comes to the items that refer to the ways it attracts users to spend their free time (see Table 5). A differentiation between the two predominant items (spending and killing time) can be noticed. This comes from the fact that the various users have a different view of what Facebook has to offer and evaluate the way they spend their time on it, accordingly.

This last factor, *Using Applications* contains items that are concerned with the applications that Facebook has to offer (see Table 5). Taking into account that the various Facebook's applications form up one factor that differentiates it substantially from other social platforms, one item focuses on Facebook's games, due to the fact that these applications' impact and popularity is more than noticeable. The way the popularity of Facebook's applications has made them an integral component of the platform, is shown by the fact that, trying applications because someone's friend is using them, is quite common nowadays.

In Figure 1, the recognised factors are presented:

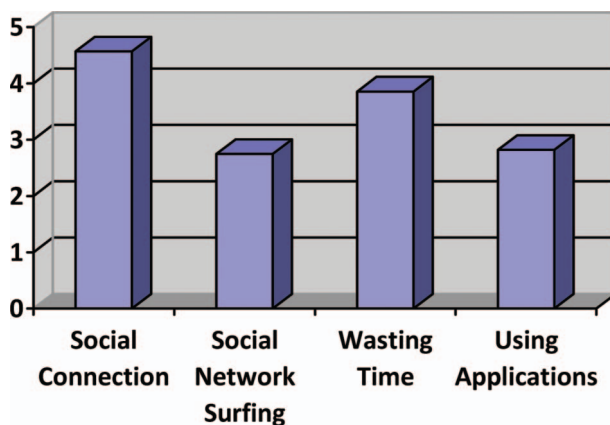


Figure 1. Average amount of each factor, based on its items.

Despite the fact that these factors arise from an orthogonal rotation and are separable in terms of item loadings, they are correlated (see Table 6). The Spearman correlations between the factors suggest that the U&G identified are related, in some cases relatively strongly.

Another research issue which addresses Facebook users' gratifications, is the influence of demographics and more specifically, based on the differences in demographics, how users' individual differences (gender, age, education, marital) relate to their gratifications sought for Facebook uses.

In order to examine the issue of the influence of demographics in perceptions regarding the Facebook uses, the Analysis of Variances (ANOVA) Method was conducted. The resulting data for each factor are presented in Table 7. As *one* can see in Table 7, 'Gender' exhibits a highly significant impact on the factor 'Using Applications'  $F(221) = 12,258$ ,  $p < 0.005$ . In addition, it was found that 'Gender' has a significant effect on 'Social Network Surfing'  $F(221) = 4886$ ,  $p < 0.05$ . These results provide strong support for the notable influence of 'Gender' in Facebook uses and perceptions. Regarding the impact of the other demographic characteristics (age, education, marital), the findings showed that there is no significant difference in users' perceptions. Overall, the results suggest that women are more likely than men to use Facebook for its applications. On the other hand, men are more likely than women to use Facebook in order to search for something (Figure 2).

## 5. Discussion

The actual U&G of social network sites are not well understood. The study's main characteristic is that, there is an attempt to investigate the way the platform is used, from the user's point of view. The desired final goal is to clarify the users' perception, regarding the factors that provide the motivation for engaging with this particular platform. While past research studying the uses and features of this particular social network, including the degree it manages to attract the average user, has already been conducted, constant alterations and modifications concerning the social network's functionality can be observed, throughout the years of the social network's existence. In the process of clustering phase and the principal component analysis phase four factors were recognised. The most important uses of Facebook tended to relate to 'social connecting' and 'Wasting Time'. While Social Connection's impact has been previously reported (Lampe *et al.* 2007, Joinson 2008), this is not the case with the 'Wasting Time' factor.

Users derive a variety of U&G from social networking sites, including traditional gratification

Table 6. Spearman correlations between Factors ( $n = 222$ ).

	Social connection	Social network surfing	Using applications	Wasting time
Social connection	1			
Social network surfing	0.233**	1		
Using applications	0.245**	0.177**	1	
Wasting time	0.178**	0.403**	0.397**	1

Note: \*\*Correlation is significant at the 0.01 level.

Table 7. Demographics testing using analysis of variances (ANOVA).

Dependent variable	Mean (SD)			
	Gender	Age	Education	Marital
Social connection	0.433	0.683	0.420	1.644
Social network surfing	<b>4.886*</b>	0.312	0.935	0.912
Wasting time	0.020	0.563	0.639	0.814
Using applications	<b>12.258**</b>	0.335	1.537	0.205

Note: \*\* $p < 0.005$ ; \* $p < 0.05$ .

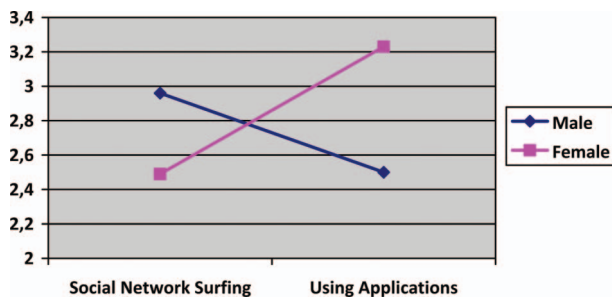


Figure 2. The influence of gender in 'Social Network Surfing' and 'Using Applications'.

alongside building social capital, communication and social browsing. The study clearly confirms, that functions and features that comprise the 'Social Connection' factor, remain the predominant reason that enables Facebook to attract new users and successfully preserve current users at an active state. The 'social browsing' factor, previously identified by Lampe *et al.* (2006, 2007), is also identified in this study, being closely related to the 'social surfing' factor. In addition, the factor 'using apps' which is identified, is also closely related to Vasalou *et al.* (2010) 'games and applications' factor. Observing the mean values of these factors we can indicate an important growth from (2.44) in the research of Vasalou *et al.* (2010) at 2008 to (2.82) in our research which is conducted two years later. This is also supported by the phenomenal growth number of Facebook game users (Games Statistics 2011). Last but not least, the most interesting result of this research is the impact of the factor called 'Wasting

Time'. This factor reveals to a greater degree, the user's perception regarding the use of Facebook, and to a much lesser degree (if not existent), the potential uses of the platform. This factor would probably have never come up, if it were not for a number of questions in the first stage of the study, that were structured so as to emphasise on users' emotions, inner thoughts and feelings concerning Facebook, on top of the more conventional questions. As a result, the items comprising the 'Wasting Time' factor were formed and on top of this, they were highly rated comparatively to the other factors, verifying the soundness of the first stage's results. Another fact for the great growth of the factor Wasting Time, is the 50% increase of the item *Just for Fun* from previous research (Sheldon 2008b). In addition, Coley (2006) asserts that for the case of students, most of them are using Facebook for fun, to organise parties, and to find dates. Coley (2006) explains that fact by the likability of students to the opportunity to find others with similar interests, students with whom they are in class, and in using Facebook, they feel a sense of community and connectedness. The fact that the 'Wasting Time' factor has had such an impact in this study, could be interpreted as a result of Facebook's early success, that, combined with its continuous tendency to evolve, managed to preserve such a large number of active users for such a long time. As a consequence, Facebook is eventually perceived as a part of the users' daily routine, in a manner that the way they view and use this particular social network, may be greatly affected.

A person's life story which is determined by disposition (age, gender and outward appearance), socialisation (origin, education and employment) and the current life situation (family, children) may influence how and why people act (e.g. using social network sites). In this study, we found that, users' gender influences their perceptions regarding the Facebook uses, especially, the analysis of variance (ANOVA) showed that female respondents are using more Facebook applications and they are surfing on Facebook less than male respondents. These are supported by previous studies (e.g. boyd 2007, Hargittai 2007, Thelwall 2008, Hoy and Milne 2010, Kimani *et al.* 2010) which indicate an important effect of demographics in Facebook users' motivations and beliefs.



As it has already been stated, it is evident that Facebook is currently being used by a large number of users. This could be a result of its features that enabled the platform to substantially differentiate itself from its competitors. This, in turn, rendered Facebook a very successful and attractive platform for someone to use and to spend time on.

Although our findings provide meaningful implications regarding the uses and the motivations of Facebook users, our study has several limitations. One of these limitations is the sample frame. In particular, the majority of the sample was drawn from a public university in the north-western Greece. It should also be noted that the nature of the sampling method, and the self-selection of respondents, may have influenced the pattern of responses and overall levels of activity, although the researchers have no reason to believe that the source of the sample biased the results. Creating a sampling frame that adequately represents non-college users of Facebook has been a challenge, and needs further development. In addition, as we used a one-time survey, we cannot establish causality. Finally, respondents of the third stage may have misreported behavioural information, as we used measures which created in the first stage of this study.

In many ways, the limitations of this article highlight areas for future research. As it relates to the sample, future studies should be conducted which include a variety of institutions from a variety of geographic regions.

## 6. Conclusions and further research

In this study, which was conducted in a manner similar to previous researches, an effort was made in order to trace some of these alterations regarding the platform's features and functionalities and to imprint their impact on the user. While some fluctuation can indeed be observed in factors like 'Social Surfing', it was the impact of the 'Wasting Time' factor that led to the most interesting conclusion. This refers to the fact that a possibly large number of users view Facebook, not only as a set of tools and applications that enable them to engage with the activities that a social network is supposed to support, but as an integral part of their everyday routine, an element that is indicative of a relation between a successful social network and a satisfied user. Another interesting finding of this study is the influence of gender in users' perceptions regarding the Facebook usage factors. Thus, this work indicates that female respondents are using more Facebook applications and they are surfing on Facebook less than male respondents.

The results of this study add to our knowledge and open up new avenues of thinking about the impact of each Facebook usage factor. For social network

designers, the need for developing more attractive social applications and games appear, due to the phenomenal growth of social gaming and the 'Wasting Time' motivations of users'. In addition, designers cannot assume that their features share the same value at each demographic group.

By making an analogy to the Web, which has grown from a scholarly publication medium into an application platform, we are observing a similar pattern of evolution in the development of Facebook. In particular, it seems that once a medium has attracted a critical mass of adoption by mainstream users, it evolves into a platform, which keeps the roots of the technology (e.g. publishing, socialisation) as a component in a broader portfolio of features.

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