Is social networking media affecting social interaction between users?

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Abstract

The research aimed to find out whether social networking media is reducing the amount of social interaction by users with their peers on a face to face basis and it established that this was the case. The project also examined the differences in Facebook usage by males and females. The research also indicated that Facebook usage is affected by levels of self-esteem. A tailored questionnaire was designed and was completed by 114 males and 128 females chosen from Irish Facebook users aged 18 years old and upwards. The research did not support the hypothesis that females spend more time on Facebook than males but it did indicate significant differences in the ways in which females use Facebook as compared to males.

Introduction

There has been a massive increase in the use of social networking media in recent years, as illustrated by the fact that Facebook had grown to 800 million users in eight years (The Irish Times, 2012). Prior research has not yet led to an agreement as to the relationship between internet use and social interaction with some research suggesting that that it leads to decreased communication between family members (Kraut, Patterson and Lundmark, 1998) and others that there was little or no relationship between internet use and social interaction (Shklovski, Kiesler and Kraut, 2006). This relationship may have changed in recent times due to the increase in numbers of people spending time on social networking sites such as Facebook. Access to the internet has grown enormously. Most people now have internet access in their homes and do not have to rely on visits to internet cafes or having to use work or college based computers. Many people now have smart phones which allow easier access to the internet and social media sites (The Irish Times, 2012).

These changes may have had an effect on the level of face to face interactions among people. Previous research in this area may now be outdated and it may be useful to look at this again with a special focus on the behaviour of Irish users. The current project focuses on the use of the social networking site Facebook by Irish users and as to whether Facebook usage has a negative effect on face to face communication. This research also addresses gaps in existing knowledge regarding the use of social networking sites. It explores the question as to whether there are differences between the genders in the way in which they use Facebook. It also examines whether the levels of self-esteem of users affects the way in which they use Facebook.

Facebook and MySpace: Complement or substitute for face to face interaction?

A recent study (Kujath, 2011) noted that previous studies had claimed that social networking sites were used as a substitute for face to face interaction, resulting in

deteriorating relationship quality and decreased intimacy among its users. Kujath (2011) hypothesized that this type of communication was not a substitute for face to face interaction but rather it was an extension of communication with face to face partners.

A survey was used by Kujath (2011) to examine the use of Facebook and MySpace in this regard among 183 college students. The study found that Facebook and MySpace did act as an extension of face to face interaction, but that some users tended to rely on Facebook to MySpace for interpersonal communication more than face to face interaction (Kujath, 2011).

Kujath (2011) noted that an early study by Kraut et al (1998) found that when used primarily for communication purpose, extensive use of internet was associated with decreased communication among family members within a household. Kraut et al (1998) also found that extensive use of the internet led to a reduction in the size of one's social circle and increases in depression and loneliness. Kraut et al (1998) attributed these negative effects to the substitution of online relationships for stronger offline relationships. In a follow-up study using the same group of participants, Kraut, Boneva, Cummings, Helgeson and Crawford (2002) found that more frequent internet use of the internet (specifically email) was associated with increased contact with local and distant social partners. Furthermore, Kraut et al (2002) found that frequent use among adults was associated with more face to face communication with family and closer feelings toward extended family and friends.

It was noted by Kujath (2011) that these conflicting findings had led to controversy over the effects of computer-mediated communication on interpersonal relationships. Several studies had suggested that these effects were largely dependent on the goals of computer-mediated communication e.g. Kraut et al, (1998) found that when computer-mediated communication was used as a substitute, the effects on interpersonal relationships were negative. On the other hand, Kraut et al, (2002) found that when used as a compliment to face

to face interaction then computer mediated communication facilitated the maintenance of interpersonal relationships.

The objective of the study by Kujath (2011) was to determine whether previously found effects of computer-mediated communication on interpersonal relationships generalise specifically to the social networking site, Facebook and MySpace and to understand the extent to which those sites are used to create new relationships rather than to maintain prior existing face to face relationships. The study also examined the extent to which some users depend more on Facebook and MySpace as a substitute for face to face interaction.

In Kujath's (2011) study, a non-random sample of 183 college students identifying themselves as Facebook or MySpace site users participated in the study. They were asked to identify how frequently they used the sites to meet new people they had never met before and how frequently they used the sites to keep in touch with people they already knew. In addition, respondents were also asked to indicate how frequently they use the sites to communicate with their friends online more than they do in person, as well as asked to identify the number of times they used Facebook and MySpace per day, per week or per month and to indicate the amount of time they spent on those sites each time they were on them in hours and/ or minutes.

Results of Kujath's (2011) study found that respondents reported using Facebook an average of 1.2 times per day and spent an average of 31.5 minutes each time they used it. MySpace users reported an average usage of 1.6 times a day and spent an average of 38.8 minutes for each use. Respondents tended to use the sites to keep in touch with people that they already knew far more than to meet new people that they had never met before. This suggests that the sites are more important for relationship maintenance rather than formation. These results were consistent with studies by Bargh and McKenna (2004) who found that the

maintenance of interpersonal relationships was the primary reason for computer-mediated communications (Bargh et al, 2004). To the extent that respondents communicated with their friends online more often than in person, 45% tended to do so never or seldom, while the remaining 55% tended to do so sometimes or frequently.

Kujath (2011) noted that a limitation of the study was that it had utilised a small, non-random sample of college students and that it did not examine the quality or size of a participant's existing social circle to determine how these relationships were affected by internet communications.

The Internet and Social Life

Moreover, Bargh et al (2004) examined the effects of internet use on the users' psychological well being, the information and maintenance of personal relationships, group memberships and social identity, the workplace, and community involvement. They noted that the HomeNet project by Kraut et al (1998) concluded that internet use led to negative outcomes for the individual user, such as increase in depression and loneliness, and neglect of existing close relationships. However, nearly all other relevant studies and surveys, including a follow-up of the HomeNet sample by Kraut and his colleagues reached the opposite conclusion Kraut et al (2002).

Kraut et al (1998) studied families in mid 1990's who did not have a computer in the home. The researchers gave these families a computer and internet access. They found after a two years period that there was a reliable but small increase in reported depression and loneliness as a function of the amount of internet use. However, a later follow-up study of the same sample revealed that the negative effects had disappeared and instead across nearly all measures of the individual adjustment and involvement with family, friends, and community,

greater internet use was associated with positive psychological and social outcomes (Kraut et al, 2010).

Furthermore, Bargh et al (2004) noted that another researcher Nie and Erbring (2000) reported data from a U.S nationwide survey of approximately 4000 people, and concluded from those data that heavy internet use resulted in less time spent with one's family and friends. They also noted a random national survey by Katz (2001) which showed that the more time internet users spent online, the more likely they were to belong to offline religious, leisure, and community organisations compared to nonusers.

Social Networking: Communication revolution or evolution?

Coyle and Vaughan (2008) examined the literature on social networking sites and conducted their own studies of how students on American campuses engage in social networking. Coyle et al (2008) noted that a meta-analysis was conducted by Shklovski et al (2006) of 16 studies run between 1995 and 2003 with data from over 35,000 subjects. This meta-analysis concluded there was little to no relationship between internet use and social interaction. Their overall finding was that the internet had not had any broad affect on social interaction (Shklovski et al, 2006). The authors' explanation for the lack of relationship between internet use and offline social connections was the difference in communication with friends versus family. They suggested that the internet may serve as a source of friendship reminders to give attention to one's friends, which is necessary for friendship to thrive, yet is not necessary for relationships with family which are less fleeting (Shklovski et al, 2006).

Coyle et al (2008) conducted a survey and two focus groups to learn about college students' communication habits, including social networking. They designed a questionnaire that included open-ended questions regarding situations in which someone is more likely to choose one method of communication over another. Questions were asked such as how many

social networking accounts respondents had and on average how many times a day did they log onto a social networking site and also the who, what, why and when of their communication via social networking sites. The data was collected from 68 undergraduates who were of ages from 18-22. Results showed that on average, people visit their accounts about three times per day and that young adult Americans were not generally communicating with unknown others who share similar interests via these social networking sites but rather they were using them as a form of entertainment and a way to stay connected with people they already knew (Coyle et al, 2008).

Coyle et al (2008) noted that their survey supported the findings of others that the main purpose of social networking was to keep in touch with friends. Their findings also indicated that social networking sites were used for trivial communications with friends, both close and non-close, and that they are used to maintain friendships but not as a central form of socialising. In addition, they found that social networking was convenient for retaining contact when time and distance were issues but that it did not replace voice calls and face to face communication (Coyle et al, 2008).

Internet Paradox Revisited

Kraut et al (1998) had reported negative effects of using the internet on social involvement and psychological well being among new internet users in 1995-96. A 3 year follow-up of 208 of those respondents found that negative effects dissipated (Kraut et al, 2004). A longitudinal survey in 1998-1999 of 406 new computer and television purchasers found that they generally experienced positive effects of using the internet on communication, social involvement and well-being (Kraut et al, 2004).

Moreover, Kraut et al (2004) noted that research had not yet led to a consensus on either the nature of social interaction online or its effects on social involvement and personal well-

being. Some survey research (Riphagen and Kanfer, 1997 as cited in Kraut et al, 2002) had indicated that online social relationships were weaker than offline relationships and that people who use email heavily have weaker social relationships than those who do not. Also people who use the internet heavily report spending less time communicating with their families (Cole, 2000 as cited in Kraut et al, 2002). In contrast, other survey research (Pew Internet and American Life Project, 2000 as cited in Kraut et al, 2002) shows that people who use the internet heavily report more social support and more in-person visits with family and friends than those who use it less.

Students and Social Networking Sites: The posting paradox

Miller, Parsons and Lifer (2010) reported on the results of a field study in which undergraduate students were questioned about their use of social networking sites and the appropriateness of the content that they post. The data was collected directly from students who used MySpace and Facebook. Students were asked about how often they visited the sites and the amount of time they spent during each visit. Focus groups were conducted with students who were active users of the sites. These focus groups were made up of students from a variety of disciplines, all attending a small private university in the Midwest United States. The sample for the study had 165 undergraduate students attending the same university as those from the focus group.

The results of Miller et al's (2010) study found that the vast majority (88.5%) admitted to visiting the sites at least once a day. Perhaps more interestingly 60% of the students reported that they visited the sites multiple times a day. Although this may lead to the assumption that students are spending hours on these sites, the results paint a slightly different picture. In fact the students reported that their individual visits tended to be short, 60% less than 10 minutes and 35.2% between 10 and 30 minutes (Miller et al, 2010).

Nevertheless, this research did not examine the impact of internet use on face to face communication. However, it does provide useful data on the frequency and duration of visits by the respondents and it also established that students used the sites primarily to maintain and expand their social network (Miller et al, 2010).

The Wired Generation: Academic and social outcomes of electronic media use among university students

A recent journal article (Jacobsen, Wade and Forste, 2011) noted that little was known about the influence of electronic media use on the academic and social lives of university students. They outlined their findings of research using time-diary and survey data to explore the use of various types of electronic media among first-year students at Brigham Young University, Provo, Utah, USA.

The time-diary results suggested that the majority of students used electronic media to multitask. Results indicated a negative relationship between the use of various types of electronic media and first semester grades. In addition, they found a positive association between social networking site use, cellular phone communication, and face to face social interaction reference (Jacobsen et al, 2011).

Jacobsen et al (2011) noted that the current college student population was more digitally active than any previous generation. The definition of electronic media which the researchers used included email, instant messaging, mobile phone communication, social-networking sites, video or online games, and television or movie viewing. They focused their study on the influence of electronic media in two spheres of college life: academics and social interaction (Jacobsen et al, 2011).

A review of previous studies by Jacobsen et al (2011) indicated a negative association between academic outcomes and the use of video games, social networking sites and other types of electronic media. For example, Levine, Waite and Bowman (2007) had found that students who instant messaged more than others showed more distractibility during academic tasks (Levine et al, 2007 as cited in Jacobsen et al, 2011). In addition, Bowman, Levine and Waite (2010) in an experiment regarding multitasking had found that students took longer to read a passage if they were instant messaging at the same time but that it did not affect comprehension relative to students that read without messaging (Bowman et al, 2010 as cited in Jacobsen et al, 2011).

Jacobsen et al (2011) noted that prior research had indicated that online communication with offline friends and family was associated with stronger offline relationships (Kraut, 2002 and Bargh, 2004), but that little attention had been paid to the trade-off between online and offline interaction in the recent literature. To test accurately the extent to which internet communication either replaces or assists offline interaction, Jacobsen et al, (2011) decided that the use of a time-diary was needed. The research was designed to utilise time-diary data to explore the relationship between electronic media exposure and student grades, as well as offline interaction, while controlling for other time use and student characteristics (Jacobsen et al, 2011).

A hypothesis was formulated by Jacobsen et al, (2011) that electronic use was negatively associated with grades due to its distractive function and secondly, hypothesized that the relationship between electronic media use and face to face interaction was negative, providing support for a displacement effect between electronic media use and offline interaction. However if the relationship was positive, electronic media use may facilitate offline interaction (Jacobsen et al, 2011).

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The researchers in Jacobsen et al, (2011) used an internet survey. Results found that on average students spent approximately 52 minutes per day using social networking sites, usually Facebook. In addition, findings indicated that students spent a daily average of 30 minutes emailing, about 10 minutes chatting on instant message services, nearly 45 minutes talking on a mobile phone or text messaging, about 10 minutes playing video games or online games and close to an hour watching TV or movies (Jacobsen et al, 2011).

The research in Jacobsen et al (2011) established that that nearly all respondents owned a mobile phone and the majority had internet access through a laptop or some other portable device. Results also found that there was a significant negative association between social networking sites exposure and academic performance but that there was a positive association between social networking sites exposure and social interaction. There was also a positive relationship between mobile phone communication and social interaction. Furthermore, for every hour increase on average in social networking sites exposure or mobile phone communication, average face-to-face social interaction increased by about 10 to 15 minutes (Jacobsen et al, 2011).

Jacobsen et al (2011) found that like previous studies (e.g. Bargh, 2004; Kraut, 2002), online communication was linked to time spent in offline relationships and found that social networking sites use and mobile phone communication facilitated offline social interaction rather than replace it. Jacobsen et al (2011) put forward several explanations for this phenomenon. Firstly, students were multitasking and were likely sending and receiving text messages or checking social networking sites while hanging out with friends. Secondly, students were likely using mobile phone communication and social networking sites to make plans with friends to go on dates, hang out or socialise. Additionally, access to social

networking sites and mobile phone communication gives students greater access to social situations in general. Furthermore, they provide students with additional mechanisms for meeting new people and keeping in touch with friends. Finally, they can distract students from academic success and at the same time facilitate social interaction and the development of social networks (Jacobsen et al, 2011).

It was noted by Jacobsen et al, (2011) that there were data limitations to the survey with a relatively low response rate to the survey of approximately 20% of all first year students. Another limitation was that a large portion of responses to the time-diary activity option "other" related to music, suggesting that music may be a multitasking activity. Jacobsen et al, (2011) suggested that future research should examine the role of listening to music, as well as innovations such as Twitter.

Literature Review Summary

This review of literature in this area has shown differences in findings by various researchers. There have been negative findings which indicated that extensive use of the internet for communication was associated with decreased communication among family members and a reduction in the size of one's social circle (Kraut et al, 1998). Other researchers have reached more neutral conclusions that there was little or no relationship between internet use and social interaction (Shklovski et al, 2006) and that social networking sites did not replace face to face communication (Coyle et al, 2008). Jacobsen et al (2011) found that there was a positive association between social networking sites exposure and social interaction and Kraut et al, (2002) found that more frequent internet use was associated with increased contact with social partners.

The current position is best summed up by Kraut et al, (2002) who stated that research had not yet led to a consensus on either the nature of social interaction online or it effects on social involvement and personal well-being.

There is therefore an opportunity to conduct further research in this area, particularly as to how the use of social networking sites is impacting on face to face communications in Ireland today.

Aims and objectives of the present research

Prior research had found that there was little to no relationship between internet use and social interaction (Coyle et al, 2008). The massive increase in the use of social networking media in recent years may have changed this relationship. The proposed research project aims to find out whether social networking media is reducing the amount of social interaction by users with their peers on a face to face basis and the research has the objective of establishing the reasons why this may be so. Existing research has primarily been based on subjects in the United States. This project examines the use of social media by users in Ireland and adds to existing international research as there may be factors which are unique to Irish users. The phenomenal growth in the use of social media means that prior research may quickly become out of date. Earlier users of new technologies may have characteristics which are less representative of the wider population. For example, they may be more computer literate than the average person. As more and more people begin to use social networking media, the users become more representative of the general population. The current project focuses on the use of the social networking site Facebook by Irish users and as to whether Facebook usage has a negative effect on face to face communication.

There are gaps in existing knowledge regarding the use of social networking sites. Prior research has not explored the question as to whether there are differences between the

genders in the way in which they use Facebook. Nor has the question been examined as to whether the self-esteem of users affects the way in which they use Facebook.

The current project proposed to contribute to filling these gaps in knowledge by examining the differences in Facebook usage by males and females and also by respondents with higher and lower self-esteem scores on "The Self-Esteem Scale" (Rosenberg, 1965).

Main Hypothesis or General Research Question:

The main hypothesis of this research is:

(H1) Facebook usage has a negative effect on face to face communication

A further hypothesis is:

(H2) Females spend more time on Facebook than males and use Facebook in a different way to males.

A third hypothesis is:

(H3) Facebook usage is affected by the levels of self-esteem of users.

Methods

Materials

A questionnaire was designed by the researcher incorporating questions that were aimed to reveal the internet usage of participants (see appendix). Questions were also included to establish possible differences in usage of Facebook by males and by females and also between different levels of self-esteem in participants. For the purpose of establishing levels of self-esteem, the questionnaire included questions based on the 'The Self-Esteem Scale' (Rosenberg, 1965).

Participants

The participants were chosen from Irish Facebook users aged 18 years old and upwards. Questionnaires were completed by 114 males and 128 females. The participants were sourced from Facebook "friends" and from Facebook "friends of friends" of the researcher. Most of the respondents were likely to have been third level college students in Dublin.

Procedure

The questionnaire was set up on Google Docs and a link to the questionnaire was shared with Facebook contacts with an invitation to participate. The results were collated on Google Docs and transferred to SPSS (a statistical computer programme) for further analysis.

Statistics/Method of Analysis:

The data from the questionnaires was analysed by using SPSS to compare the amount of time spent by participants on social networking media with the amount of time spent on face to face interactions with peers. The purpose of this analysis was to establish whether or not there was a correlation between the two variables. Comparison were be made between different classes of participants to see whether any significantly different results are

indicated. In particular, comparisons were made between responses of males and females and also between participants with Lower Self-Esteem scores and those with Higher Self-Esteem scores.

Ethical Issues

No codes of ethics were broken throughout the research. All the participants who filled out the questionnaire were over 18 and it was mentioned at the top of the questionnaire that all participants must over 18 and over to take part. The main ethical issue that arose was that the identity of participants must be protected. Their right to confidentiality in regard to their personal information disclosed in the course of the research must be respected. The individual names and addresses of participants were not recorded in the course of the research. The questionnaire was completely confidential and there were no questions which required the disclosure of participant's names.

Suitability of Research Method

The use of a tailored questionnaire was regarded as the most appropriate manner to conduct research in this area. It had the advantage of complete confidentiality of the responses of the participants and so was more likely to elicit candid replies. The questionnaire format was also suitable for statistical analysis using SPSS. Another advantage was that it was a low cost approach to gathering information and it was a speedy way to get responses within a limited time frame.

Results

H1: Facebook usage has a negative effect on face to face communication

An analysis of the responses to the questionnaire supports the hypothesis that Facebook usage has a negative effect on face to face communication. A majority of respondents agreed that they spend more time communicating on Facebook than face to face. They also agreed that the time they spent on Facebook reduced the amount of time they spent communicating with friends, face to face. A detailed analysis of responses to the individual questions revealed the following:
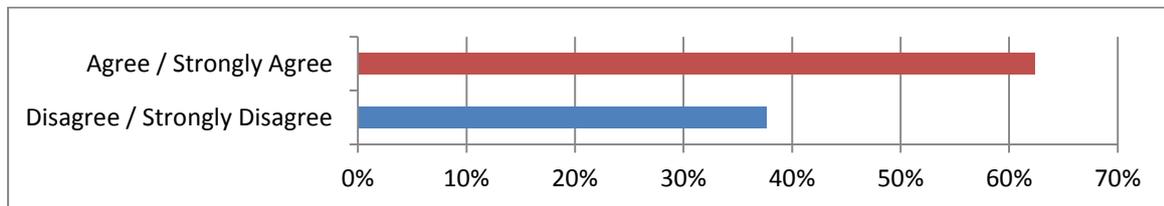
Figure 1:   I spend more time communicating on Facebook than face to face

A 62.4% majority of participants replied that they either "agree" (49.2%) or "strongly agree" (13.2%) that they spend more time communicating on Facebook than face to face. 37.6% said they either "disagree" (33.1%) or "strongly disagree" (4.5%).
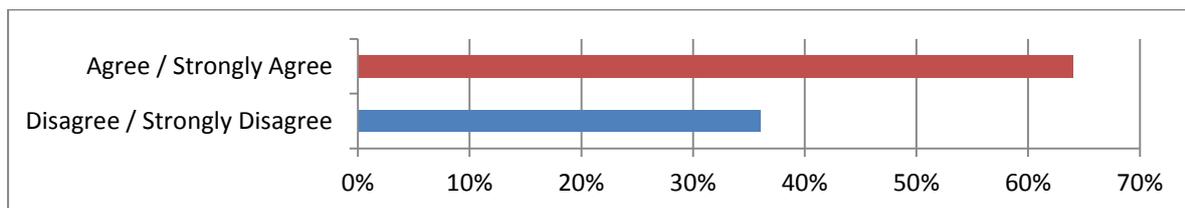

Figure 2: The time I spend on Facebook reduces the amount of time I spend communicating with friends face to face

A 63.7% majority said that they either "agree" (43%) or "strongly agree" (20.7%) that the time they spend on Facebook reduces the amount of time they spend communicating with friends face to face. 36.4% said they either "disagree" (30.6%) or "strongly disagree" (5.8%).
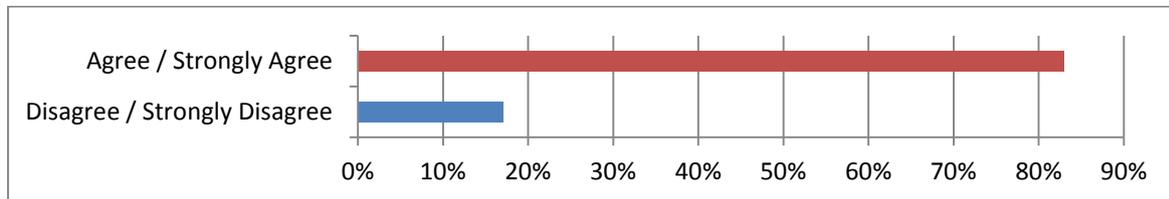

Figure 3: I use Facebook to make new friends from the Facebook contacts of my existing friends

82.6% of respondents said they either "agree" (47.1%) or "strongly agree" (35.5%) that they use Facebook to make new friends from the Facebook contacts of existing friends. 17.4% said they either "disagree" (14.5%) or "strongly disagree" (2.9%).
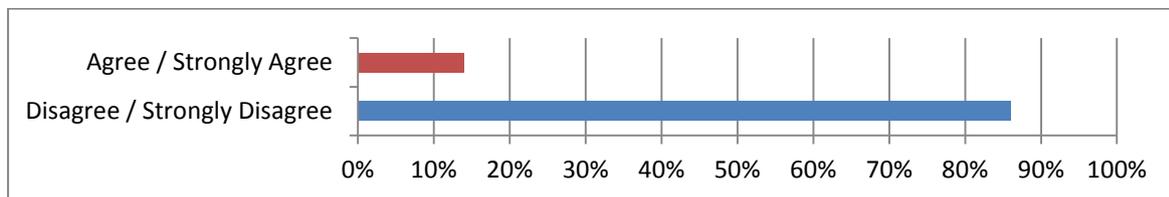

Figure 4: I use Facebook to arrange face to face meetings with my friends

A large majority of 85.9% of respondents said they either "disagree" (62.8%) or "strongly disagree" (23.1%) that they use Facebook to arrange face to face meetings with their friends. 14% said they either "agree" (9.9%) or "strongly agree" (4.1%).

When I am with friends, face to face, I sometimes check Facebook for updates

62% of respondents said they either "disagree" (50%) or "strongly disagree" (12%) and 38% said they either "agree" (24.4%) or "strongly agree" (13.6%).

When I am with my friends, face to face, it bothers me if they check their Facebook for updates

53.3% said they either "agree" (46.7%) or "strongly agree" (6.6%) and 46.7% said they either "disagree" (33.5%) or "strongly disagree" (13.2%).

If social networking sites like Facebook did not exist then I would spend more time face to face with my friends.

There was a fairly even split in replies to this question with 51.3% saying they either "agree" (42.6%) or "strongly agree" (8.7%) and 48.8% said they either "disagree" (36.4%) or "strongly disagree" (12.4%).

Facebook has helped me to re-connect with old friends with whom I had lost contact

Only 11.9% of respondents said they "agree" (10.7%) or "strongly agree" (1.2%) and 88% said they either "disagree" (58.7%) or "strongly disagree" (29.3%).

I believe that Facebook has improved my social life

A small majority of 53.7% said they either "disagree" (49.2%) or "strongly disagree" and 46.3% said they either "agree" (37.6%) or "strongly agree" (8.7%).

Inferential statistics

T-tests

It was hypothesised that Facebook usage has a negative effect on face to face communication. In order to test this hypothesis an independent samples t-test was conducted. The mean score response by males when asked "if social networking sites like Facebook did not exist then I would spend more time face to face with my friends" was 2.61 (SD=.889). This was higher than the mean score response by females which was 2.45 (SD=.751).

Independent t-test indicated that the difference was not significant t= (222.477) =1.429,

p>.05. The T-test was inconclusive in regard to the hypothesis and neither agreed or

disagreed with the hypothesis.

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H2: Females spend more time on Facebook than males and use Facebook in a different way to males.

An analysis of the responses to the questionnaire did not support the hypothesis that females spend more time on Facebook than males but it did indicate significant differences in the ways in which females use Facebook as compared to males. A detailed analysis of responses to the individual questions revealed the following:
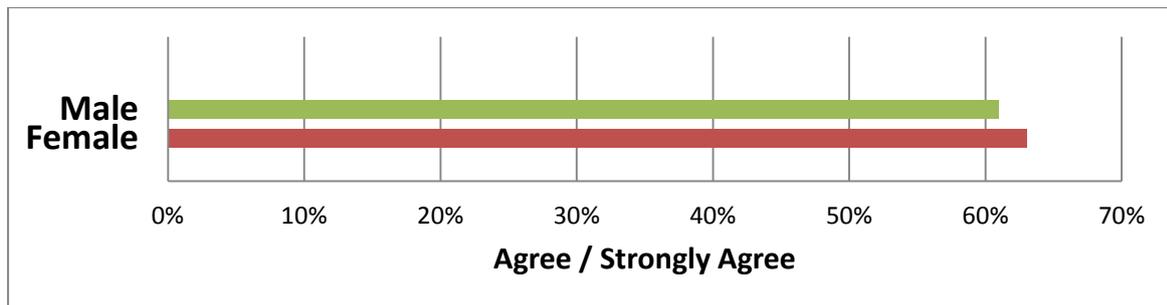

Figure 5: I spend more time communicating with friends on Facebook than face to face

Slightly more females (63.3%) than males (60.5%) either "agree" or "strongly agree" that they spend more time communicating with friends on Facebook than face to face.
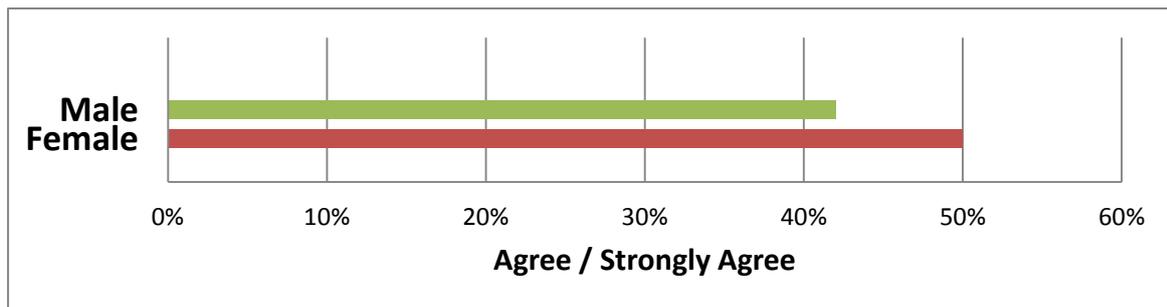

Figure 6: I believe that Facebook has improved my social life

More females (50%) than males (42.1%) either "agree" or "strongly agree" that Facebook has improved their social lives.
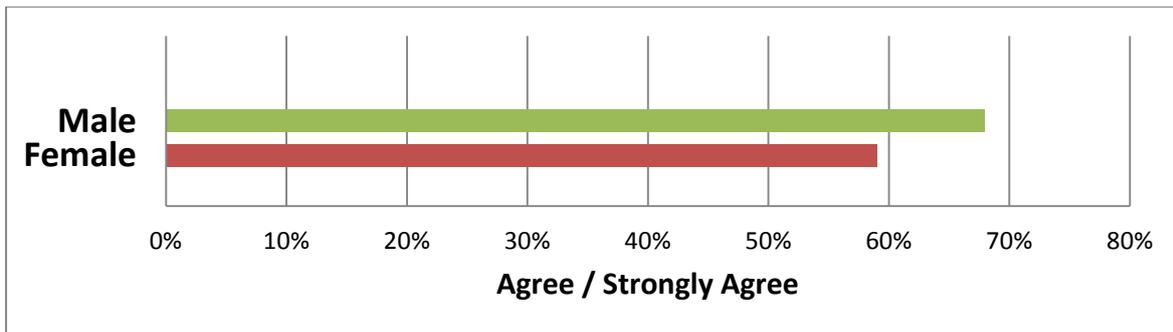
Figure 7: I sometimes log on to Facebook because I feel lonely

Males are also more likely than females to log on to Facebook because they feel lonely, with 67.6% of males and 59.3% of females saying they "agree" or "strongly agree".
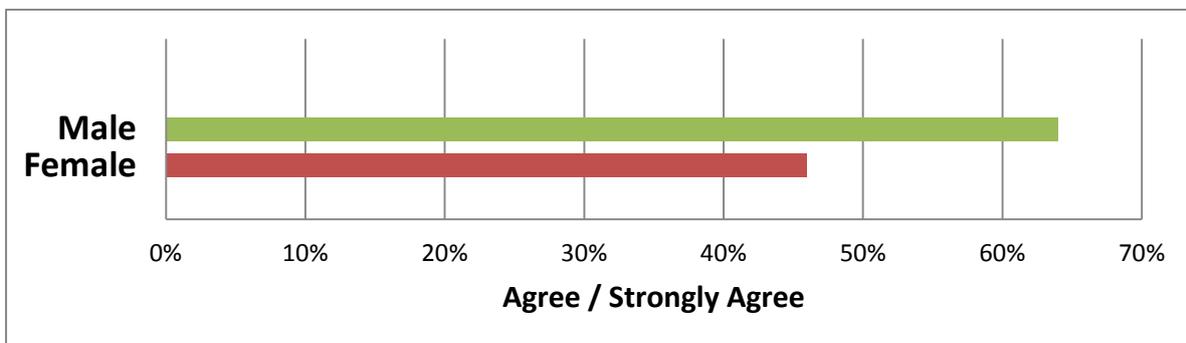

Figure 8: When I view the Facebook pages of my friends, I often feel that their social lives are better than mine

There is a significant difference between males and females when asked if they often feel that the social lives of their friends are better than theirs when they view the Facebook pages of their friends, with 64% of males saying they either "agree" or "strongly agree", compared with 46.1% of females.
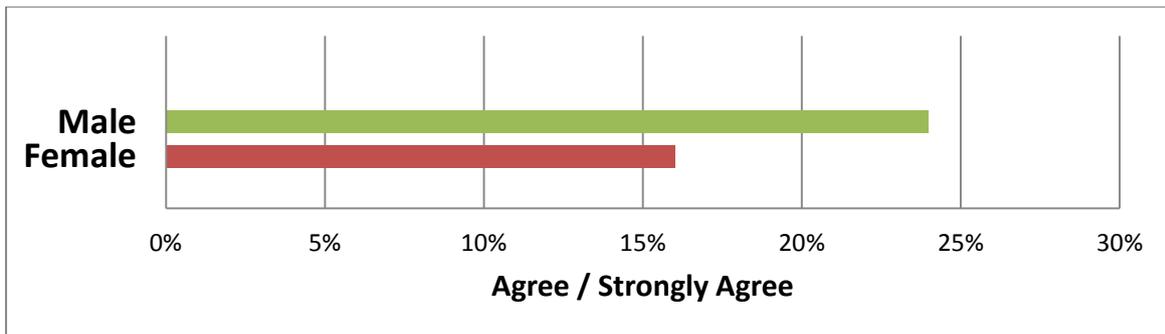
Figure 9: I sometimes spend too much time on Facebook

Males are also more likely than females to feel that they are spending too much time on Facebook, with 23.7% of males and 15.6% of females saying they "agree" or "strongly agree".
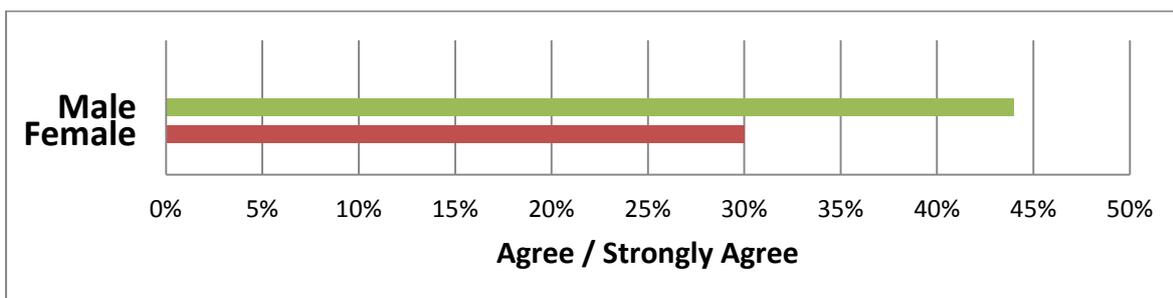

Figure 10: I sometimes feel that Facebook brings out addictive tendencies in me

There is a very marked difference in the responses of the genders to the question as to whether they sometimes feel that Facebook brings out addictive tendencies in them. 43.8% of males either "agree" or "strongly agree" and 29.7% of females that their Facebook usage has that addictive attribute.

The time I spend on Facebook reduces the amount of time I spend communicating with friends face to face

More females (65.6%) than males (61.5%) either "agree" or "strongly agree" that the time they spend on Facebook reduces the amount of time they spend communicating with friends face to face.

If social networking sites did not exist then I would spend more time face to face with my friends

A significantly larger amount of females (54.7%) than males (47.3%), either "agree" or "strongly agree" that they would spend more time face to face with friends if social networking sites did not exist.

When I am with my friends, face to face, I sometimes check Facebook for updates.

Males are more likely to check Facebook for updates when they are with friends, with 41.2% of males saying they either "agree" or "strongly agree", compared with 35.1% of females.

When I am with my friends, face to face, it bothers me if they check their Facebook for updates

An equal amount of males (53.5%) and females (53.2%) either "agree" or "strongly agree" with this question.

I use Facebook to make new friends from the Facebook contacts of my existing friends

Females are more likely to use Facebook to make new friends from the Facebook contacts of existing friends, with 85.9% of females saying they either "agree" or "strongly agree" compared with 78.9% of males.

I feel disappointed if my Facebook status or new photos get no "likes" from my friends

Males are more likely to be disappointed if their Facebook status or new photos get no "likes" from their friends, with 49.1% of males saying they either "agree" or "strongly agree" compared with 44.6% of females.

I would be unhappy if the number of my Facebook friends was a lot less than those of my peers.

Males are also more likely to be unhappy if the number of their Facebook friends was a lot less than their peers with 86% of males saying they either "agree" or "strongly agree", as compared with 81.3% of females.

The time I spend on Facebook sometimes has a negative effect on other activities, such as study and family life.

Slightly more males (28%) than females (25%) either "agree" or "strongly agree" that the time they spend on Facebook sometimes has a negative effect on other activities, such as study and family life.

Table 1

Descriptive statistics

What is your gender?		Number	Minimum	Maximum	Mean	Std. Deviation
male	totse	114	21.00	40.00	30.8772	4.62035
	totalfb	114	24.00	54.00	39.8772	6.05745
	Valid N (listwise)	114				
female	totse	128	10.00	40.00	31.9297	5.70838
	totalfb	128	23.00	54.00	40.7188	5.98020
	Valid N (listwise)	128				

The above table illustrates that females scored higher on total Facebook usage, (mean score was 40.72 and the SD = 5.98) then males, (mean score was 39.988, SD = 6.05)

Inferential statistics

T-tests

It was hypothesised that females spend more time on Facebook then males. In order to test this hypothesis an independent t-test was conducted. The mean number of Facebook time spent for males was 39.88 (SD=6.06) which was less than the mean number of time spend on Facebook by females which was 40.72 (SD=5.98)

An independent sample t-test was conducted to compare the different times of Facebook usage for males and females and showed that there was no significant difference in the mean score for males and females, $t(240) = -1.086$, $p>.05$. As the means were the same and there was no significant difference, this indicated that both males and females spend the same amount of time on Facebook. The T-test did not support the hypothesis that females spend more time on Facebook than males.

H3: Facebook usage is affected by levels of self-esteem of users

An analysis of the responses to the questionnaire supports the hypothesis that Facebook usage is affected by levels of self-esteem of users. For the purposes of analysing the effect of self-esteem on Facebook usage, all the participants, both male and female, were divided into two groups. Those with a self-esteem score lower than the mean score were labelled "Lower Self-Esteem" and those with a score higher than the mean score were labelled "Higher Self-Esteem".

There was no material difference in number of daily visits to Facebook reported by Higher Self-Esteem and Lower Self-Esteem participants. 55.8% of Higher and 55.9% of Lower indicated 1 to 6 visits. 44.1% of Higher and 45.1% of Lower indicated 7 or more visits. However, there were significant differences in other patterns of Facebook usage by both groups.

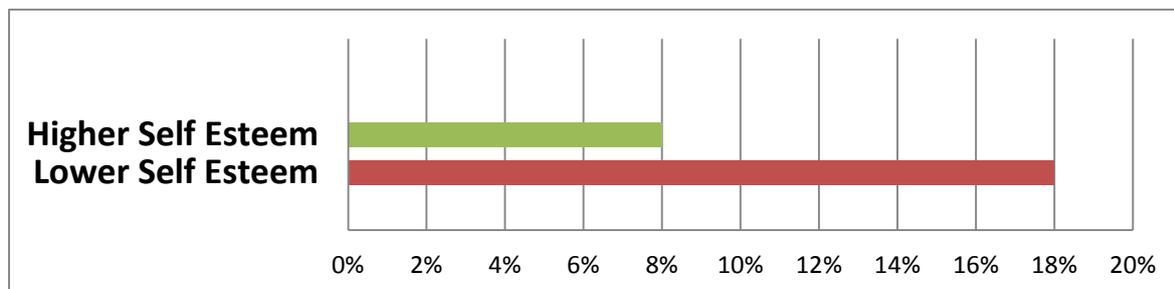A detailed analysis of responses to the individual questions revealed the following:

Figure 11: I strongly agree that I spend more time communicating with friends on Facebook than face to face

47.5% of participants with Higher Self-Esteem replied "agree" that they spend more time communicating with friends on Facebook than face to face, as compared with 50.8% of those with Lower Self-Esteem. Of those who replied "strongly agree", 8.3% were participants with Higher Esteem and 18% with Lower Esteem.
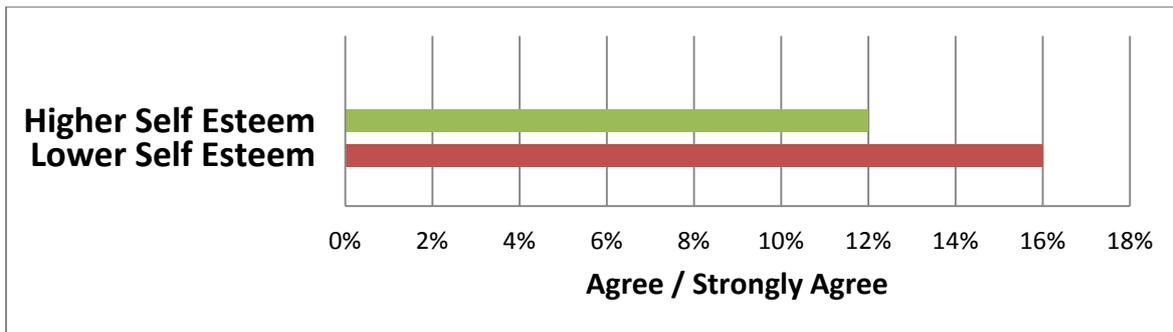
Figure 12: I use Facebook to arrange face to face meetings with my friends

16.4% of participants with Lower Self-Esteem replied that they either "agree" (11.5%) or "strongly agree" (4.9%) that they use Facebook to arrange face to face meetings with their friends, as compared with 11.6% of participants with Higher Self-Esteem.

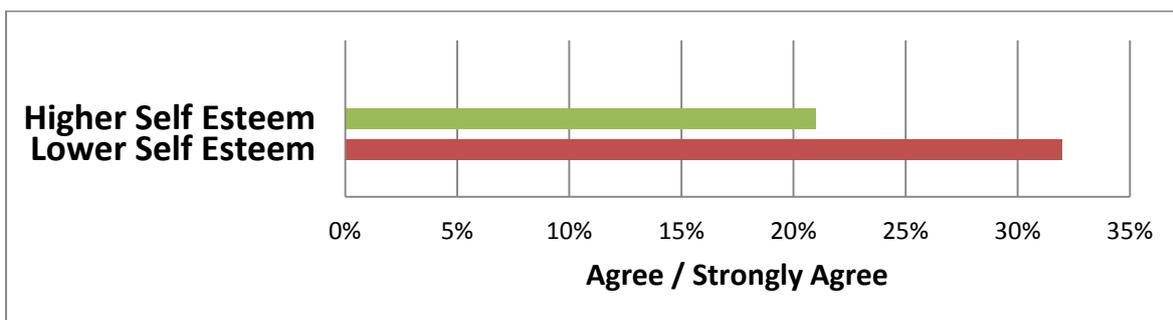**Figure 13: The time I spend on Facebook sometimes has a negative effect on other activities, such as study and family life**

21.3% of participants with Lower Self-Esteem replied either "agree" (21.3%) or "strongly agree" (10.7%) that the time they spend on Facebook sometimes has a negative effect on other activities, such as study and family life, as compared with 20.8% of those with Higher Self-Esteem.
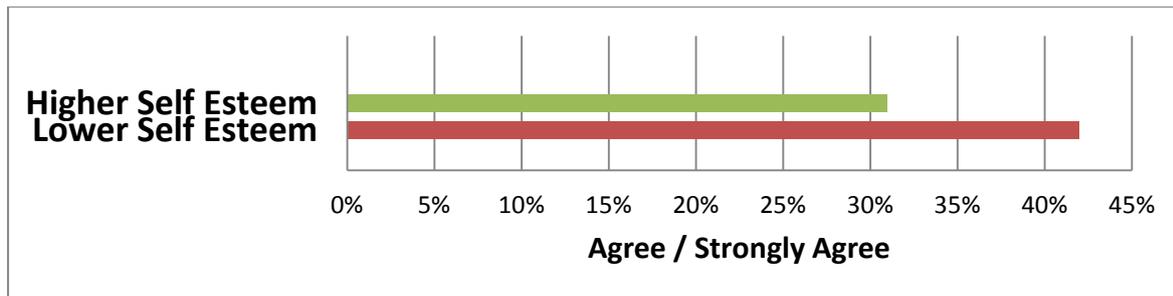
Figure 14: I sometimes feel that Facebook brings out addictive tendencies in me

41.8% of participants with Lower Self-Esteem replied either "agree" (34.4%) or "strongly agree" (7.4%) that they sometimes feel that Facebook brings out addictive tendencies in them, as compared with 30.8% of those with Higher Self-Esteem.

The following is an analysis of additional questions:

Average length of each visit less than 15 minutes

In regard to the length of each visit, 60.7% of Lower Self-Esteem participants said visits were less than 15 minutes compared with 49.2% of Higher Self-Esteem participants.

I sometimes check Facebook for updates when I am with my friends, face to face

16.4% of respondents with Lower Self-Esteem "strongly agree" that they sometimes check Facebook for updates when they are with friends, face to face, as compared with 10.8% of those with Higher Self-Esteem.

When I am with my friends, face to face, it bothers me if they check their Facebook for updates

60.6% of participants with Lower Self-Esteem replied either "agree" (54.7%) or "strongly agree" (5.7%) that they were bothered if friends check their Facebook for updates when they are with them face to face, as compared with 45.8% of those with Higher Self-Esteem.

I would be unhappy if the number of my Facebook friends was a lot less than those of my

peers

90.2% of participants with Lower Self-Esteem replied that they either "agree" (50%) or "strongly agree" (40.2%) that they would be unhappy if the number of Facebook friends was a lot less than those of their peers, as compared with 76.7% of participants with Higher Self-Esteem.

Table 2

Descriptive statistics

What is your gender?		Number	Minimum	Maximum	Mean	Std. Deviation
male	totse	114	21.00	40.00	30.8772	4.62035
	totalfb	114	24.00	54.00	39.8772	6.05745
	Valid N (listwise)	114				
female	totse	128	10.00	40.00	31.9297	5.70838
	totalfb	128	23.00	54.00	40.7188	5.98020
	Valid N (listwise)	128				

As can be seen from the above table, females scored higher on total self esteem, (mean score was 31.93 and the SD = 5.71) than males, (mean score was 30.88, SD = 4.62).

Inferential statistics

Correlations

It was hypothesised that Facebook usage is affected by the levels of self-esteem. A correlational analysis was performed to test this relationship. Pearson R correlation analysis indicated that there is a medium significant positive correlation for males between the two

variables, (r=.378, n=114, p<.01). Pearson R correlation analysis indicated for the females that there was no significant correlation between the two variables (r=.088, n=128, p>.05).

The Pearson R correlation in respect of males supported the hypothesis that Facebook usage is affected by the levels of self-esteem. In respect of females the Pearson R correlation did not support the hypothesis that Facebook usage is affected by the levels of self-esteem.

Discussion

The current project focuses on the use of the social networking site Facebook by Irish users and as to whether Facebook usage has a negative effect on face to face communication. The research also addresses gaps in existing knowledge regarding the use of social networking sites. It explores the question as to whether there are differences between the genders in the way in which they use Facebook. It also examines whether the self-esteem of users affects the way in which they use Facebook.

H1: Facebook usage has a negative effect on face to face communication

The main hypothesis of the study was that Facebook usage has a negative effect on face to face communication. A majority of participants in the current survey confirmed that that they spend more time communicating on Facebook than face to face (Figure 1) and also that they felt that the time they spend on Facebook reduces the amount of time they spend communicating with friends face to face (Figure 2). This would suggest that to some extent Facebook communication has substituted for face to face contacts and so has a negative effect in that respect. This would concur with the findings reported by (Kujath, 2011) who noted that previous studies had claimed that social networking sites were used as a substitute for face to face interaction, resulting in deteriorating relationship quality and decreased intimacy among its users. However, Coyle et al (2008) noted that a meta-analysis had been conducted by Shklovski et al (2006) of 16 studies run between 1995 and 2003 with data from over 35,000 subjects. This meta-analysis concluded there was little to no relationship between internet use and social interaction. Their overall finding was that the internet did not have any broad affect on social interaction Shklovski et al (2006).

Even when face to face contacts are taking place, Facebook can have a negative effect by interrupting communication. 38% of respondents to the current survey admitted to sometimes

checking Facebook for updates even when they were with friends. This habit of their friends checking Facebook when they were with them was bothersome to 53.3% of respondents.

There was no clear majority view to the question as to whether they would spend more time face to face with friends if social networking sites like Facebook did not exist, with only 51.3% agreeing that it would have that effect.

Surprisingly, only 11.9% of respondents agreed that Facebook had helped them to re-connect with old friends with whom they had lost contact. Part of the reason for this response may be that Facebook is relatively new and has grown substantially in recent years. When people have been longer on Facebook one would expect the number of old friends who will re-connect through Facebook should grow. If this occurs than it will be a positive effect of Facebook as when old friends re-connect online, it should subsequently lead to more face to face meetings.

Another positive effect of Facebook is that 82.6% of respondents agreed that they use Facebook to make new friends from the Facebook contacts of existing friends (Figure 3). A new pool of online friends should lead to face to face meetings with some of those online friends.

One may have expected that activity of Facebook would lead to an improvement in the social life of members. However, the survey showed that a small majority of 53.7% disagreed that Facebook had improved their social life. This would concur with Coyle et al (2008) who noted that their survey supported the findings of others that the main purpose of social networking was to keep in touch with friends. Their findings also indicated that social networking sites were used for trivial communications with friends, both close and non-close, and that they are used to maintain friendships but not as a central form of socialising. In addition, Coyle et al (2008) found that social networking was convenient for retaining contact

when time and distance were issues but that it did not replace voice calls and face to face communication reference.

Again, one may have anticipated that Facebook would have been used to arrange face to face meetings with friends. However, a large majority of 85.9% of respondents in the current research disagreed that they use Facebook to arrange face to face meetings with their friends (Figure 4). Presumably, face to face meetings are arranged more often by other means, such as telephone voice calls and texts.

The main hypothesis of the study that Facebook usage has a negative effect on face to face communication was validated by the responses to the questionnaire. The majority of participants confirmed that that they spend more time communicating on Facebook than face to face (Figure 1) and also that they felt that the time they spend on Facebook reduces the amount of time they spend communicating with friends face to face (Figure 2). The results of the T-test used to test the hypothesis was inconclusive and neither agreed or disagreed with the hypothesis.

H2: Females spend more time on Facebook than males and use Facebook in a different way to males.

The second hypothesis in this study was that females spend more time on Facebook than males and use Facebook in a different way to males.

A majority of both genders agreed that that they spend more time communicating on Facebook than face to face (Figure 5) and also that they felt that the time they spend on Facebook reduces the amount of time they spend communicating with friends face to face. Slightly more females than males agreed to both these effects.

Males are more likely than females to check Facebook for updates when they are with friends. This would suggest that males have a more casual attitude to interrupting face to face communications with friends. Females may be more conscious that it may be impolite to their friends to do this. In regard to the question as to whether they are bothered if friends check Facebook for updates when they are together face to face, both genders were close to the average "agreed" response of 53.3%, so there was no gender difference on this issue.

A significantly larger amount of females (54.7%) than males (47.3%) felt that they would spend more time face to face with friends if social networking sites did not exist. It would appear from this that females are more likely than males to see Facebook as a substitution for face to face meetings.

Females use Facebook to a greater extent than males to make new friends from the Facebook contacts of existing friends. This would suggest that males prefer to make new friends from offline contacts, as compared with females. This does not necessarily mean that females make fewer offline friends than males, as no information was gathered on that point. Females may be better or worse at making offline friends compared with men, but the survey would suggest that females are better at making online friends.

Females see Facebook as having a positive effect on their social lives with 50% of females confirming that Facebook has improved their social lives compared with 42.1% of men (Figure 6).

Males would appear to be more sensitive than females as they are more likely to be disappointed if their Facebook status or new photos get no "likes" from their friends.

A majority of both genders said that they are more likely to log on to Facebook because they feel lonely, with a greater proportion of males than females indicating this (Figure 7). This would suggest that males have a more emotional connection with Facebook than females. Further research could investigate whether Facebook usage increases if people are feeling depressed.

This link to loneliness and possible depression reflects an observation by Kujath (2002) who noted that an early study by Kraut et al (1998) found that when used primarily for communication purpose, extensive use of internet was associated with increases in depression and loneliness.

Bargh et al (2004) noted that the HomeNet project by Kraut et al (1998) concluded that internet use led to negative outcomes for the individual user, such as an increase in depression and loneliness, and an increase in the neglect of existing close relationships. However, nearly all other relevant studies and surveys, including a follow-up of the HomeNet sample by Kraut (2002) reached the opposite conclusion.

Males would also appear to be more sensitive than females when comparing themselves with the lives of online friends, as 64% of males said they feel that the social lives of their friends are better than theirs when they view the Facebook pages of their friends, compared with 46.1% of females (Figure 8). A majority of both genders said they would be likely to be

unhappy if the number of their Facebook friends was a lot less than their peers, with males indicating a greater degree of unhappiness than females.

Only a minority of both genders felt that the time they spend on Facebook sometimes has a negative effect on other activities, such as study and family life. This does not concur with Bargh et al (2004) who noted that another researcher Nie and Erbring (2000) reported data from a U.S nationwide survey of approximately 4000 people, and concluded from those data that heavy internet use resulted in less time spent with one's family and friends.

Males revealed a greater awareness of the addictive effect of Facebook usage than females, with 43.8% of males saying that they sometimes feel that Facebook brings out addictive tendencies in them, compared with 29.7% of females (Figure 10). This suggests that females have a more controlled approach to Facebook usage than males.

Males are also more likely than females to feel that they are spending too much time on Facebook, with 23.7% of males and 15.6% of females saying they "agree" or "strongly agree" (Figure 9).

The descriptive statistics indicated that females scored higher on total Facebook usage, than males (Table 1). However, the results of the T-test did not support the hypothesis that females spend more time on Facebook than males. The T-test showed that there was no significant difference and indicated that both males and females spend the same amount of time on Facebook.

H3: Facebook usage is affected by levels of self-esteem

A third hypothesis was that Facebook usage is affected by the levels of self-esteem of users. Self-esteem was assessed by 'The Self-Esteem Scale' (Rosenberg, 1965), which measures global feelings of self-worth or self-acceptance. This 10-item scale is scored using a 4-point response format (1= strongly agree; 4 = strongly disagree) to statements such as "I feel that I have a number of good qualities". Scores range from 10-40, with higher scores indicating higher self-esteem.

It was interesting to note that the mean self-esteem score of all respondents was relatively high at 31.43. This would suggest a bias towards higher self-esteem individuals in the population from which the participants were selected. This was a weakness in the selection process and it would be advisable for any further research to look at a more generally representative population.

For the purpose of comparison and analysis, respondents with a score less than the mean score were labelled "Lower Self-Esteem". Respondents with a score greater than the mean score were labelled "Higher Self-Esteem". It is important to note that "Lower Self-Esteem" does not equate with "Low Self-Esteem" in all cases but merely identifies respondents with scores lower than the relatively high mean score reflected in the particular population.

Although there was no material difference in the number of daily visits reported by Higher Self-Esteem and Lower Self-Esteem participants, the Lower Self-Esteem spent less time on average on each visit, as 60.7% of them said visits were less than 15 minutes compared with 49.2% of Higher Self-Esteem participants. This would indicate that Lower Self-Esteem participants spend less time overall on Facebook than Higher Self-Esteem participants. The reason for this may be that that the Lower Self-Esteem participants have a less active online social life and therefore they may have less to talk about with online friends

or it may be that they have fewer Facebook friends than Higher Self-Esteem participants. Further research would be needed to establish if this were true. A weakness in the questionnaire was that it omitted to ask participants to indicate the number of their Facebook friends.

The survey revealed that a greater percentage of Lower Self-Esteem than Higher Self-Esteem participants agreed that they spend more time communicating with friends on Facebook than face to face. The percentage of Lower Self-Esteem participants who replied "strongly agree" to this question at 18% was more than twice that of Higher Self-Esteem participants at 8.3% (Figure 11). This may indicate that people with Lower Self-Esteem may be shyer when it comes to face to face inter-action and may find it easier to communicate with friends online.

Participants with Lower Self-Esteem were more bothered if friends check their Facebook for updates when they are with them face to face. 60.6% of participants with Lower Self-Esteem replied either "agree" or "strongly agree" that they were bothered, as compared with 45.8% of those with Higher Self-Esteem. This probably reflects a more relaxed attitude to face to face meetings by Higher Self-Esteem people as compared with those with Lower Self-Esteem. People with Lower Self-Esteem may be lacking in confidence in social situations and may take it as an indication that they are not interesting companions if their friends divert their attention away to check their Facebook page. There is an apparent contradiction in the attitudes of Lower Self-Esteem respondents as 16.4% of participants with Lower Self-Esteem "strongly agree" that they sometimes check Facebook for updates when they are with friends compared with a lower 10.8% of those with Higher Self-Esteem. It would appear that Lower Self-Esteem participants are more likely than Higher Self-Esteem participants to check their Facebook for updates when they are face to face with friends and yet they are also more likely to be bothered if their friends do the same thing.

A larger proportion of participants with Lower Self-Esteem at 16.4%, as compared with 11.6% of participants with Higher Self-Esteem, replied that they either "agree" or "strongly agree" that they use Facebook to arrange face to face meetings with their friends (Figure 12). This may be because people with Lower Self-Esteem may find it easier to initiate contact online to make arrangements to meet friends rather than to make a request by direct verbal contact.

Participants with Lower Self-Esteem appear to be more sensitive about have too few Facebook friends as 90.2% of them replied that they either "agree" or "strongly agree" that they would be unhappy if the number of Facebook friends was a lot less than those of their peers, as compared with 76.7% of participants with Higher Self-Esteem. The number of Facebook friends may be seen as a public sign of popularity and people with Lower Self-Esteem may have feelings of inadequacy if they have fewer online friends than others.

A significantly larger number of participants with Lower Self-Esteem at 32%, as compared with 20.8% of those with Higher Self-Esteem, either "agree" or "strongly agree" that the time they spend on Facebook sometimes has a negative effect on other activities, such as study and family life (Figure 13). This would suggest that people with Higher Self-Esteem manage to achieve a better balance between online and offline activities than do those with Lower Self-Esteem.

Similarly, a significantly larger number of participants with Lower Self-Esteem at 41.8%, as compared with 30.8% of those with Higher Self-Esteem, either "agree" or "strongly agree" that they sometimes feel that Facebook brings out addictive tendencies in them (Figure 14). This would suggest that people with Lower Self-Esteem feel less in control of their Facebook usage and may have a more compulsive need to spend time on Facebook than those with Higher Self-Esteem. Although the survey shows that Higher Self-Esteem participants spend

more time overall on Facebook, they would seem to have a more controlled approach to Facebook usage and may be less compulsive in the need to use Facebook than participants with Lower Self-Esteem.

The foregoing analysis of responses to the questionnaire supports the hypothesis that Facebook usage is affected by levels of self-esteem. The Pearson R correlation in respect of males supported the hypothesis that Facebook usage is affected by the levels of self-esteem. In respect of females the Pearson R correlation did not support the hypothesis that Facebook usage is affected by the levels of self-esteem.

Conclusions

The current project focuses on the use of the social networking site Facebook by Irish users and as to whether Facebook usage has a negative effect on face to face communication. This project has helped to fill in gaps in existing knowledge regarding the use of social networking sites. Prior research had not explored the question as to whether there are differences between the genders in the way in which they use Facebook. Nor had the question been examined as to whether the self-esteem of users affects the way in which they use Facebook.

The main hypothesis of the study was that Facebook usage has a negative effect on face to face communication. A majority of participants in the current survey confirmed that that they spend more time communicating on Facebook than face to face and also that they felt that the time they spend on Facebook reduces the amount of time they spend communicating with friends face to face. This would suggest that to some extent Facebook communication has substituted for face to face contacts and so has a negative effect in that respect. This would concur with the findings reported by (Kujath, 2011) who noted that previous studies had claimed that social networking sites were used as a substitute for face to face interaction,

resulting in deteriorating relationship quality and decreased intimacy among its users.

In regard to the second hypothesis, an analysis of the responses to the questionnaire did not support the hypothesis that females spend more time on Facebook than males but it did indicate significant differences in the ways in which females use Facebook as compared to males. One interesting conclusion was that males appeared to have a more emotional connection with Facebook than females, with males more likely to log on to Facebook when they are feeing lonely. Further research could investigate whether Facebook usage increases if people are feeling depressed. This link to loneliness and possible depression reflects an observation by Kujath (2002) who noted that an early study by Kraut et al (1998) found that when used primarily for communication purpose, extensive use of internet was associated with increases in depression and loneliness.

I regard to the third hypothesis, the current research indicated that Facebook usage is affected by levels of self-esteem. This was supported by the Pearson R correlation in respect of males. However, in respect of females the Pearson R correlation did not support the hypothesis that Facebook usage is affected by the levels of self-esteem.

Limitations of the current research

Several limitations were noted during the course of the research. The main questionnaire was compiled by the researcher who does not have the necessary specialised training. This means that the results lack scientific reliability. It would have been preferable if the questionnaire had been devised by a person with the appropriate expertise and if it had been psychometrically tested. Further research should use a more reliable questionnaire for Facebook usage and self-esteem analyses. In addition to self-esteem, further research could look at other aspects of mental health, such as depression and anxiety.

The participants of the survey were sourced from the Facebook friends and Facebook "friends of friends" of the researcher. This meant that there was a selection bias in favour of participants who are in third level education and also in the age range 18 to 24 years old. The mean self-esteem score of respondents was higher than average which may suggest a bias towards participants with higher self-esteem. Additional research in this area should select participants from a wider population to give a more representative view of Facebook usage in Irish society. It may useful to also examine the Facebook usage patterns of specific sectors, such as older people or particular ethnic groups. Participants could be selected for research by handing out paper copies of the questionnaire to members of specific target groups rather than relying on prospective respondents locating the questionnaire online.

A more direct comparison of results could have been made with previous research if an existing questionnaire from an earlier survey had been used rather than a new one.

Participants were asked to estimate the amount of time they spend on Facebook and the number of their visits. These estimates could have been unintentionally inaccurate to a significant degree which would undermine the reliability of the findings. It would have been preferable to have asked participants to keep a time diary for Facebook usage over a period of time. This method was used in research by Jacobsen (2011) and it would have been interesting to have been able to make a direct comparison of results of the current survey with the findings of Jacobsen (2011).

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Appendix

Facebook Survey

This study is concerned with the use of Facebook. Please answer each section as honestly as you can. Do not spend too long thinking about each question as there are no right or wrong answers. Any information that you give will remain strictly confidential. You are not required to write your name anywhere on this survey. I hope you find this interesting, and I would like to thank you in advance for your time and co-operation.

* Required

What is your age? *

○ 18 to 24

○ 25 to 29

○ 30 and over

What is your gender? *

○ Male

○ Female

Do you use Facebook? *

○ Yes

○ No

How do you access Facebook *

○ only by computer (laptop, desktop, iPad)

○ only by mobile phone

○ by both computer and mobile phone

How many times a day on average do you access Facebook? *

○ 1 to 3 times

○ 4 to 6 times

○ 7 to 9 times

○ 10 times or more

What is your average length of each visit to Facebook? *

○ less than 15 minutes

○ 16 to 30 minutes

○ 31 to 60 minutes

○ 1 to 2 hours

○ more than 2 hours

I spend more time communicating with friends on Facebook than face to face *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

The time I spend on Facebook reduces the amount of time I spend communicating with friends face to face *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

When I am with my friends, face to face, I sometimes check Facebook for updates *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

When I am with my friends, face to face, it bothers me if they check their Facebook for updates *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

If social networking sites like Facebook did not exist then I would spend more time face to face with my friends *

Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

Facebook has helped me to re-connect with old friends with whom I had lost contact *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

I use Facebook to make new friends from the Facebook contacts of my existing friends *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

I believe that Facebook has improved my social life *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

I use Facebook to arrange face to face meetings with my friends *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

I feel disappointed if my Facebook status or new photos get no 'likes' from my friends *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

I sometimes log on to Facebook because I feel lonely *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

When I view the Facebook pages of my friends, I often feel that their social lives are better than mine *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

I would be unhappy if the number of my Facebook friends was a lot less than those of my peers *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagee

○ strongly disagree

I sometimes spend too much time on Facebook *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

The time I spend on Facebook sometimes has a negative effect on other activities, such as study and family life *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

I sometimes feel that Facebook brings out addictive tendencies in me *
Please state how much you agree or disagree with this statement

○ strongly agree

○ agree

○ disagree

○ strongly disagree

Please read the following statements and indicate how much you agree with them by checking the appropriate box to the right of the statement

Q1 *

	strongly agree	agree	disagree	strongly disagree
I feel that I am a person of worth, at least on an equal basis with others	○	○	○	○

q2 *

	strongly agree	agree	disagree	strongly disagree
I feel that I have a number of good qualities	○	○	○	○

q3 *

	strongly agree	agree	disagree	strongly disagree
All in all, I am inclined to feel that I am a failure	○	○	○	○

q4 *

	strongly agree	agree	disagree	strongly disagree
I am able to do things as well as most other people	○	○	○	○

q5 *

	strongly agree	agree	disagree	strongly disagree

	strongly agree	agree	disagree	strongly disagree
I feel that I do not have much to be proud of	○	○	○	○

q6 *

	strongly agree	agree	disagree	strongly disagree
I take a positive attitude towards myself	○	○	○	○

q7 *

	strongly agree	agree	disagree	strongly disagree
On the whole, I am satisfied with myself	○	○	○	○

q8 *

	strongly agree	agree	disagree	strongly disagree
I wish I could have more respect for myself	○	○	○	○

q9 *

	strongly agree	agree	disagree	strongly disagree
I certainly feel useless at times	○	○	○	○

q10 *

	strongly agree	agree	disagree	strongly disagree
At times I think I am no good at all	○	○	○	○

Submit