Social media, extraversion, self-concept and school performance: The case of Facebook with children as users

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Abstract

Facebook has become a popular social network among the youth. This study examined the relationship between Facebook use, personality traits of 10 to 13-year-old children who used Facebook and their school performance. Three hundred and fifty (350) pupils of elementary and secondary schools in Patras participated in a survey conducted with appropriate questionnaires. The purpose of the survey was to highlight the way in which traits such as extraversion and self-concept of the child, as well as its school performance, are associated with social media tools, especially with Facebook. In addition to this, the survey contributed to the promotion of educational issues related to new technologies and the way that such technologies affect the personality and the school performance of young users. The results deserve attention, further investigation and discussion.

Keywords: Social networks, extraversion, self-concept, school performance

Introduction

The need for communication has imposed imperative guidelines on technological formations, changing the way people act and think (Amichai-Hamburger et al, 2002; Amichai-Hamburger & Vinitzky, 2010). Social media and Facebook, as the most popular social media tool (Ryan et al., 2014; Statista, 2018), are in the center of technological interest, satisfying contemporary requests for both communication and information (Hughes et al., 2011).

Nowadays, it is stated that more than 2,2 billion active users worldwide are on Facebook monthly (Facebook, 2018), while some users admit that they login Facebook more than once daily (Kirschner & Karpinski, 2010). Previous studies have focused on identifying the types of people who use Facebook (Rafee & Bonds-Raacke, 2008, Tufekci, 2008) and have investigated the relationship between Facebook use and personality traits of its users (Ross et al., 2009) or especially, the relationship between Facebook use and personality traits of university students (Yesil, 2014). Recent research has shown that adolescents register as members on social networks without having reached the desired age limit (Kosir et al., 2016).

The present study aimed to investigate the way children's personality traits, such as extraversion and self-concept as well as school performance are linked with social networks use, and Facebook use in particular.

The results are expected to contribute to the promotion of educational issues related to technologies and the way they influence the personality and the school performance of young users.

Literature Review

The case of Facebook

Research has shown the preference of young people for Facebook compared with other online social networks (Pempek et al., 2009; Lenhart et al., 2010). The difference between Facebook and other social networks is that the former promotes an offline to online social networking trend (Ellison et al., 2014). Facebook changes the way people communicate and relate to each other (Richardson & Hessey, 2009), allowing its users to create a profile where they can upload a range of personal information such as age, marital status, etc., expressing in this way their personal identity (Pempek et al., 2009).

Linking the extraversion, as a personality trait, to Facebook

Hamburger and Ben-Artzi (2000) were the first to demonstrate the correlation between personality and internet use, arguing that personality is a highly relevant factor when examining the way people behave on Internet. A lot of researches have been conducted exploring several aspects of this relationship (e.g. Ross et al., 2009; Amichai-Hamburger & Vinitzky, 2010).

Researchers who investigated the relationship between personality and internet use, were likely to use the Model of Five Personality Factors known as "the Big Five" (e.g. Funder, 2000). The Five Personality Factors are extraversion, neuroticism, openness to experience, conscientiousness and agreeableness (Amichai-Hamburger & Vinitzky, 2010). Each factor has two (2) opposite poles (e.g. extraversion - introversion, neuroticism - emotional stability). For the purposes of this study, only the extraversion factor was considered.

Extraverted people are confident, social and always eager to talk (Costa & McCrae, 1992). On the opposite pole, there are introverted individuals, who are quiet and shy (Costa & McCrae, 1992). Extraversion is linked to social media use (Correa et al., 2010) both for information and communication (Sheidman, 2012). Extraverted people are more likely to anticipate social interactions over the Internet than the introverts (Gosling et al., 2011). Extraversion, as a personality factor, has been found to be strongly associated with Facebook use (Ross et al., 2009; Amichai-Hamburger & Vinitzky, 2010).

Moreover, extraversion has been found to be a great predictor of the number of friends on Facebook and the frequency of posting photos and updating the personal status on Facebook (Lee et al., 2014). Ryan and Xenos (2011) have shown that extraverted people often use Facebook for communication. This finding is consistent with other findings revealing that the extraverts tend to have more friends (Amichai-Hamburger & Vinitzky, 2010) and join more groups on Facebook (Ross et al., 2009) since they are involved in more social activities (Costa & McCrae, 1992) and seek social attention (Ashton, Lee & Paunonen, 2002).

Linking the self-concept to Facebook

Self-concept is defined as the knowledge that the individual retains for himself (Psarou & Zafiropoulos, 2001; Makri-Botsari, 2001), regardless of whether this knowledge is right or wrong (Burns, 1982). Academic self-concept predicts school performance (Hattie, 2009) and plays a tremendous role for student's motivation and achievement at school (Wigfield & Eccles, 2002). Thus, positive self-concepts are created when children do well in school and via versa.

Social networks create the impression that some users are better than others (Chou & Edge, 2012), thereby sharpening the social comparison between users and the way users perceive themselves through the given comparison. According to Festinger (1954), individuals engage

in social comparison to gain self-understanding.

In addition to this, people evaluate and understand their abilities and opinions through comparisons with others. This social comparison process seem to be facilitated via SNSs. Researchers have investigated people's social comparison behavior on SNSs and its implications for psychological well-being (Lee, 2014; Vogel, Rose, Roberts & Eckles, 2014).

De Vries and Kühne (2015) have shown that the intensity of Facebook use would cause a negative social comparison on Facebook and thus, provoke the emergence of negative self-expressions and self-concepts. The findings argued that Facebook may affect negatively the well-being of young people by forming negative social comparisons and negative self-concepts (de Vries & Kühne, 2015).

However, several surveys, which highlighted on the distinct aspects of self-concept, have shown that the intensity of social media use, such as Facebook, had a positive effect on social self-concept (Blomfield & Barber, 2014). Male adolescents, who had reported to have a profile in an online social network, displayed higher levels of social self-concept than adolescents who had not been members in any online social network (Blomfield & Barber, 2014).

What is more, Facebook users perceived themselves as more efficient in managing their relationships with peers, probably because of the way Facebook users preserved their offline relationships through the online communication (Kosir et al., 2016). In accordance with the needs of the present study, children's self-concept regarding to their school performance has been examined.

Linking school performance to Facebook

Questioning the relationship between Facebook use and academic performance, Kirschner and Karpinski (2010) have shown that when Facebook and reading were performing at the same time, the former had a negative effect on the latter. The survey did not implicate Facebook to be a predictive tool for a poor academic performance, but yet warned that any activity taking place at the same time with Facebook may induce poor results (Kirschner & Karpinski, 2010).

In addition to this, Facebook users that took part in the survey of Kirschner and Karpinski (2010) reported to have received low scores in their academic studies and devote only few hours weekly for studying. On the contrary, participants who claimed that had not use Facebook, had a high average score in their academic performance as they dedicate more hours studying their lessons than being on Facebook. Therefore, Facebook, as a distinct variable, affected negatively the average score in the semester (Junco, 2012).

Research questions

The research questions, which have been conducted for the present study, were the following:
H1. Extraverted children, because of their propensity for sociability:
(a) would make frequent Facebook use,
(b) would use Facebook for communication,
(c) would have more friends on Facebook,
(d) would belong to more groups on Facebook, and
(e) would post more personal photos on Facebook.
H2. Children with low self-concept regarding to their school performance would use Facebook, posting photos and personal information, in order to increase their self-concept.
H3. High school performance is expected to be related with the lack of a Facebook account, since school reading may not be interrupted.

Method

Participants

Three hundred and fifty (350) children aged from ten (10) to thirteen (13) years old participated in the survey. Out of these, 178 were boys and 172 were girls, while 284 children attended elementary schools (5th and 6th grade) and 66 children attended secondary school (1st grade) in Patras city.

Children's participation in the survey provided the completion of a questionnaire over a time period of forty five seconds (45').

Research tools - instruments

Each participant completed:

- A questionnaire concerning the Facebook use (time of usage, number of friends and photos, content of posts etc.) conducted by Ross et al. (2009) and translated into the Greek language by the researchers for the needs of the present study. A few questions have been added in order to make them more responsive to the target audience (e.g. "I do not use Facebook because my parents do not allow me to", "My parents know I have a Facebook account"). In the questionnaire was also included a five-point likert scale concerning the Facebook use, which was conducted by Hughes et al. (2011) and translated into the Greek language by the researchers for the needs of the present study. All regulations relevant to the methodology were respected in order to ensure the validity of the research (Panagiotakopoulos & Sarris, 2016). In accordance with such regulations, the propriety of the content of the questionnaire was examined by a team of three experts, while a pilot study was taken.
- Piers-Harris Children's Self-Concept Scale–Second Edition (Piers-Harris 2) (Piers & Harzberg, 2002) to assess self-concept in children regarding only their school performance. According to the relevant literature (Stalikas, 2002), the self-reported questionnaire included sixteen (16) variables.
- The Big Five Questionnaire for Children (Kokkinos & Markos, 2014) in the context of the assessment of extraversion as a personality factor. Both reliability and validity of the conceptual construction of the scale have been confirmed in previous research (Barbaranelli et al., 2003), while in Greece, they have been studied in a sample of 1103 pre-adolescents aged 10 to 12 (Kokkinos & Markos, 2014), confirming the initial structure of the questionnaire. What is more, in the study of Kokkinos, Koukoutsis & Voulgaridou (2015), the individual dimensions of the scale have shown adequate internal consistency indicators in a sample of 282 participants aged 9 to 14.

Moreover, pupil's teachers were asked to evaluate the school performance of the children who participated in the survey on a seven-point scale (1=very low to 7=very high school performance). School performance was evaluated through reading, spelling, written expression, language management (overall), and overall school performance.

Results

Facebook use

Although the minority of the participants reported to have a Facebook account (3 out of 10 participants), this remains an important finding as referring to children aged ten (10) to thirteen (13) as Facebook users. All participants who did not have a Facebook account stated

that they were well aware of Facebook, which shows the popularity of Facebook among the young people.

Boys reported more often that they were Facebook users compared to girls (x^2=15; df=1; p=<,05). The results indicated statistically significant relationship between age and possession of Facebook account (x^2=39,7; df=3; p=<,05).

Based on frequencies, the 46% of children who attended the first grade of secondary school reported to be Facebook users, while only the 17,7% of children who attended the two last grades of elementary school stated to have a Facebook account.

The average time of Facebook usage was half hour (1/2h) daily, while the average number of friends on Facebook claimed to be three hundred and twenty-four (324) friends. The more friends the user had, the more photos he/she had posted in his/her profile. The majority of users (58,7%) cited messages as the most favorite Facebook application among others.

School performance through Children's Self-Concept Scale and Facebook use

The scale's internal consistency was considered to be high (Cronbach's a =, 78).

The results showed statistically significant relationship between possession of Facebook account and user's self-concept regarding his/her school performance (x^2=6.5; df=2; p=<,05). The 73,2% of the children who rated themselves as "very good pupils" noted that they did not have a personal account on Facebook.

In contrast, most children who perceived themselves as "a little good pupils" had Facebook profiles (58,3%).

Extraversion through Big Five Personality Scale and Facebook use

The internal consistency of the scale was high (Cronbach's a =,86).

Although we hypothesized that the extraverts, due to their tendency to be social, would use Facebook more often, this statement failed to be confirmed.

Given to their strong tendency for sociability, we hypothesized that extraverted children would use Facebook for communication (e.g. personal messages). Extraverted users claimed that they were using Facebook primarily for socialization (r=,306; n=105; p=<,05) and in order to keep in touch with friends (r=,276; n=105; p=<,05). However, messages were not claimed as the most popular Facebook application for them.

The research question that more extraverted children would have more online friends on Facebook and belong to more groups on Facebook was verified. The results showed that more extraverted users belonged to more groups on Facebook (r=,263; n=105; p=<,05) and had more online friends (r =,207; n=105; p<,05).

Extraversion, as a personality factor, was associated with the number of photos uploaded to Facebook (r=,255; n=105; p=<,05). However, there was no statistically significant relationship between extraversion and the frequency of posting personal photos on Facebook.

Evaluating children's school performance through teachers' evaluation scale

The internal consistency of the scale was high (Cronbach's a =,87).

The results showed statistically significant relationship between the possession of Facebook account and users' school performance as assessed by teachers, regarding reading (x^2=14; df=6; p=<,05), spelling (x^2=16,2; df=6; p=<,05), written expression (x^2=30; df=6; p=<,05), language management and language ability for usage (overall) (x^2=23; df=6; p=<,05) and mathematics (x^2=20; df=6; p=<,05).

Teachers rated as high the skills of children who had previously reported that they did not

have a Facebook account. However, children who reported that they had a personal profile on Facebook were rated by their teachers with a low degree in their school performance.

Discussion & Conclusions

Facebook regulations allow users to be register in the platform in the condition that they have overcome the age limit of thirteen (13) years old. The survey showed that one out of three (1/3) participants violated such regulations and login Facebook by completing false data. The 94,3% of them claimed that they completed such false data in order to login Facebook with the permission of their parents. Approximately half of the pupils who did not have a Facebook profile (48,6%) reasoned their young age for this.

According to the first research question, the survey failed to show a statistically significant relationship between extraversion and frequency of Facebook use. However, it was found that extraverted children used Facebook primarily for socialization and in order to keep in touch with their friends. This finding fits with earlier research findings that have shown that the extraverts were often looking for social engagements over the Internet and used it primarily for communication (Ryan & Xenos, 2011).

In accordance with the survey of Amichai-Hamburger and Vinitzky (2010), extraverted young Facebook users had many friends because of their tendency to be social (Costa & McCrae, 1992). Lee et al. (2014) have shown that extraversion, as a personality trait within Facebook users, could predict posting photos on Facebook. In addition to this, the results of the present study confirmed the research statement above. Finally, pupils who were more extraverted were members of many groups on Facebook, similar to the study of Ryan and Xenos (2011) with adult users as participants.

As far as the second research question was concerned, research showed that pupils with low self-concept regarding to their school performance had a personal Facebook account, while children who reported a high self-concept on their school performance, did not claim to join Facebook.

Examining the third research question, in accordance with the survey of Junco (2012), Facebook use was drawn to be negatively related to user's school performance in reading, spelling, mathematics, written expression, language and general school performance, as rated by their teachers.

The above results, as has already been mentioned, come from a competent sample of children who attended elementary and secondary schools in Patras city. Although the results cannot be generalized, still they display the prevailing situation and the impact of social media (with Facebook as a representative) on pupils. They also highlight the penetration and some effects of this popular online social network in childhood. Therefore, such results deserve attention, further investigation and discussion.

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