Examination of the social network sites usage patterns of pre-service teachers

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ABSTRACT

There are quite number of studies exploring effect of social media on academic achievement and performance. In this study, it was aimed to investigate the pattern of social network use of pre-service teachers in order to understand whether it is a "threat" on their academic achievement or the way of using social media can change this negative effect into positive. 412 pre-service teachers were asked to complete a survey with additional open-ended questions about their daily social network use. Results showed that the way of using social networks defines the benefits or harms on the academic achievement. It is also found that students are comfortable with social media when it is used as a communication tool among students and instructors.

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1. Introduction

When computer technologies became easily accessible and affordable for ordinary people, the purposes of harnessing rapidly expanded. The current areas of usage of some technologies are different from their introductive purpose. In its infancy, the inventors of ARPANET might have not aimed at becoming a worldwide service. Now, Internet related technologies have almost become the main (or primary) communication tools. As the Internet usage habits of users enhanced, interesting ways of online socializations emerged in various ways, and the concept of "Social Network Sites" (SNS) can be considered to be one of the popular methods of online socializing. Internet and social media have become an important way to socialize (Gemmill & Peterson, 2006; Jeong & Coyle, 2014; Kirschner & Karpinski, 2010), in addition to being a primary communication tool (Efe, 2015; Glusac, Makitan, Karuvic, Radosav, & Milanov, 2015; Palmer, Boniek, Turner, & Lovell, 2014). Moreover, almost half of adolescents and young adults benefit from these tools to complete their school work (Asterhan & Rosenberg, 2015; DeBell & Chapman, 2006; Efe, 2015; Shana & Abulibdehb, 2015). Although the number of users from various age groups is increasing, college students are still amongst the primary social network users (Lipsman, 2007; Miller & Melton, 2015). SNS can be defined as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system,

(2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Boyd & Ellison, 2008, p. 211).

The history of SNS is not quite old. The first SNS called *SixDegrees.com* was established in 1997 (Boyd & Ellison, 2008). The target users, the purpose of usage, and the boundaries of networks have changed as the time passed. After 2000, new SNS's such as LinkedIn, Facebook, and Twitter launched all of which are now quite popular. The properties of SNS are rather different from those of an ordinary web site. Unlike the latter one, SNS are shaped based on the user's profile and his/her contacts regardless of their personal interests.

SNS are highly popular among students. Recent researches reported that SNS are famous among college students who frequently use and visit Facebook and Twitter more than once a day (Kirschner & Karpinski, 2010; Miller & Melton, 2015). This popularity has constituted the thought, which suggests that SNS could be a beneficial tool for educational activities (Stanciu, Mihai, & Aleca, 2012). Recently, SNS research has gained popularity among scholars and thus many articles have been written in different fields of studies, especially for the last five years (Lytras, Mathkour, Abdalla, Yanez-Marquez, & Ordonez de Pablos, 2014). The number of studies focusing on the SNS use in education has been increasing. Although SNS are not specifically designed for educational purposes, the recent trends indicate that students and educators have been benefitting from them to enhance their teaching and learning processes (Asterhan & Rosenberg, 2015; Paliktzoglou, Stylianou, & Suhonen, 2014; Yaman & Yaman, 2014). There are studies

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integrating SNS such as Facebook into formal education context (e.g. Benetoli, Chen, & Aslani, 2015; Dyson, Vickers, Turtle, Covan, & Tassone, 2015), while some other studies are trying to enhance online collaboration of international students by harnessing them (e.g. Meshur & Bala, 2014). SNS that are designed for educational purposes, such as Ning, have been emerging and there are attempts to integrate them into distance education settings, which result in enhanced student–student or student-instructor communication (Ozmen & Atici, 2014). The research shows that both the use of SNS, and education software or tools such as Edooware, which enables the use of SNS may also contribute to education (Balakrishnan, Liew, & Pourgholaminejad, 2015). On the other hand, perspectives of students may change the way how SNS are used in education (Dyson et al., 2015) because limited perspectives of students can result in limited uses (e.g. Kahveci, 2015) or vice versa (e.g. Glusac et al., 2015). Privacy, trust, and seriousness concerns of students and instructors can affect how SNS are utilized as an educational tool. For example, in their study, Maloney, Moss, and Ilic (2014) indicated that students have concerns regarding these issues despite the existence of beliefs about the benefits of SNS in learning.

There are studies reporting the existence of negative correlation or no correlation at all between SNS use and academic achievement (Enriquez, 2010; Karpinski & Duberstein, 2009; Kolek & Saunders, 2008; Martin, 2009). Conflicting results also exist in the literature. For instance, in their study, Kirschner and Karpinski's (2010) claim that quantitative and qualitative results do not support each other. In other words, despite the statistically significant relations between Facebook use and academic performance, students tended to claim no relations. Focusing on the use of students, and studying on the faculty perspective might shed light on the overall relations between SNS use and academic achievement. For example, a group of researcher found that students are more inclined to use SNS for class related works than faculties (Roblyer, McDaniel, Webb, Herman, & Witty, 2010). Moreover, teachers' use of SNS such as Facebook can positively affect the social relationship between teachers and students (Asterhan & Rosenberg, 2015; Mazer, Murphy, & Simonds, 2007). Not only relationships between faculty and students, but also learning engagement and grades have also been proven to be positively affected by SNS such as Facebook (Wang, 2013). No matter how active the user is, the education related posts sometimes could be considerably low in amount (Selwyn, 2009), which might be attributed to the lack of teacher support or any other factor.

The use of SNS by educators and students may have different effects on the academic processes. According to Olele (2014), educators have more tendencies to integrate web based facilities into educational activities. Moreover, their preferred social media tools differ from those of students. SNS can be generally described as ways of socialization for students and the academic use is just a part of this socialization (Staines & Lauchs, 2013), but educators set the SNS as a means of communication and collaboration for academic purposes (Asterhan & Rosenberg, 2015; Paliktzoglou et al., 2014; Shraim, 2014; Tuten & Marks, 2012). Therefore, potential benefits of SNS for students' academic lives should be necessarily investigated together with the pattern of socialization throughout social media.

In short, the literature offers potential benefits of using SNS, but their relations to academic achievement are not very clear. What students assert about the effects of SNS use might not always match with the existing relations between SNS and academic achievement. Diffusion of a new method, new approach or a new technological advancement might not be easily seen in educational environments. At this point, the role of teachers becomes much more crucial in realizing this diffusion in education. If teachers believe in the usefulness and benefits of this novelty or innovation,

they could be more enthusiastic about using them. It was assumed from this point of view that examination of SNS use of pre-service teachers could provide valuable information for the future use of them in educational activities. On the other hand, a number of existing studies related to pre-service teachers report that SNS are not perceived as educational tools unless they are put into use in a proper way. The reason why pre-service teachers do not make use of SNS in their educational activities is that SNS are time consuming, distractive, and unreliable from their point of view (Kahveci, 2015; Yaman & Yaman, 2014). In order to clarify the uncertainty about the mutual relationship between the SNS and their educational use, we aimed to investigate the patterns of pre-service teachers' SNS usage. By doing so, we tried to understand whether SNS are "threats" for pre-service teachers' academic achievements or whether the way of using SNS can turn this negative effect into positive.

2. Methodology

The main purpose of the study is to explore the patterns of pre-service teachers' social media use and to understand the relationship between social media and academic achievement. The main research question is "what are pre-service teachers perceptions about social media use in terms of academic life?" The following sub-questions were answered in order to collect the ultimate results;

1. Which SNS are popular among pre-service teachers?
2. What are the reasons causing pre-service teachers to use SNS?
3. What are pre-service teachers' perceptions about the effect of SNS on academic achievement?

2.1. Participants

426 Pre-service teachers from Information Technology (IT), Math, and Ground School Education departments participated in this study. Ground school and Math teachers constitute a considerable part of in-service teachers' population in Turkey. These teachers are the ones with considerable teaching hours in their weekly schedule. So, investigating their SNS usage when they are pre-service teachers could provide information to understand their future use. On the other hand, IT teachers work as technology consultants for both teachers and students in schools. Their believes in social media use in schools can shed light on the future of this issue. These candidates were selected by using purposeful and convenience sampling methods. All these participants are continuing their higher education in a public Turkish University. Table 1 below summarizes the demographics.

Table 1
Demographics.

	Frequency	Percent
Gender		
Male	200	49.3
Female	206	50.7
Department		
IT	298	73.4
Math	39	9.6
Ground School	69	17.0
Years of study		
1	55	13.5
2	47	11.6
3	157	38.7
4	134	33.0
5	9	2.2