

## The usage of social network services in school management and their effects

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### Abstract

This study, which aims to find out the positive and negative aspects of the usage of social networking services in the management of schools, was designed as a qualitative research. Open-ended questionnaire and semi-structured interview forms were used together with multiple data collection techniques in this study. It was found that some of the schools used the Facebook account as social network service in the past, and then they deactivated their accounts. On the other hand, it was noted that all school principals used WhatsApp application for communication with other administrators and teachers of their schools. The findings of this study revealed that the school principals' following positive views such as eliminating the time and space constraints in communication, being fast and safe, being useful in sharing school resources and materials, being easy to manage and being effective in moving the school culture out of the school.

**Keywords:** School management, school culture, technology aided communication, social network services, interaction.

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## 1. Introduction

When designed in line with the requirements of science and knowledge, digital technologies and associated applications that can lead to revolutionary changes in almost all fields have eliminated the boundaries in the communication. In particular, the frequency, duration and the use of internet technologies continue to increase rapidly, as well as reshaping the way people communicate, making it possible to experience real and virtual life simultaneously. In the formation and maintenance of real and virtual lives, it is possible to say that social networks have an important share in providing structures that can respond to changing forms of communication. These structures (Boyd, 2003), which facilitate the interaction between individuals and groups, offer various options for social feedback, support the formation of social relations, and thus have become a part of the daily routines of users (Dunne, Lawlor & Rowley, 2010; Papacharissi & Mendelson, 2011). The research studies on the mathematical network analysis have clearly put forward that there are rules for such lives within their structures, they are in relation with individuals and they affect and mutually shape one another (Christakis & Fowler, 2012). As social network services which put people in the centre (Boyd & Ellison, 2007), they have become one of the indispensable elements of our daily lives. Consequently, the effects of these structures on individuals as well as their usability and effects on learning–teaching processes have become a major focal point to be examined by the field experts.

There is much evidence that social networks, which are used not only by young people but also individuals of all age groups, penetrate into educational environments and are even used as effective learning platforms in these environments (Cetinkaya, 2017a, 2017b). Although each of them shows some structural differences, the studies on social networking services have revealed that they have the potential to support communication, to increase social interaction and cooperation, to increase interest and motivation, to increase the sense of belonging and commitment and to allow sharing of materials and information (see Arteaga Sanchez, Cortijo & Javed, 2014; Cetinkaya, 2017a; Goodband, Solomon, Samuels, Lawson & Bhakta, 2012; Junco, 2012; Selwyn, 2009; Ziegler, 2007). These already existing and widely accepted environments can be used within the course of real life, often without any formal training (Cetinkaya, 2017a).

Much educational technology training, which is considered to be useful in educational settings, has been mostly given to teachers and other stakeholders. However, social networking services have begun to benefit from the existing potentials without any effort. The existence of the potential to affect this interaction not only in the learning–teaching process but also in school interaction and in school management should not be ignored. As a matter of fact, individuals' positions in social structure and their relationships and interactions with other actors, rather than their characteristics, gain more importance (Borgatti & Ofem, 2010). From this point of view, it is possible to talk about the potential of social network services' influences within the natural flow of life during the communication and management of the stakeholders at schools. The fact that schools have a structure that produces value and allows these values to be shared among their members is largely the result of the relations between the members of schools (Er & Calik, 2017). The social network of schools can be seen as a summary of the communication behaviours that the school members have developed with each other (Bakkenes, De Brabander & Imants, 1999). In general, managers are the focus of the education within the school and the local community, and they should be able to communicate effectively (Rowicki, 1999). Since teachers and administrators play a key role in day-to-day work of schools, their effective communication skills cannot be ignored (Rowicki, 1999), and the social networking services can serve as a mediator of this communication.

From this point of view, social network services can add different dimensions to existing concepts with regards to interaction and management within schools as well as helping the emergence of unknown fields of study. This study, which was designed within this framework, aims to find out the positive and negative aspects of the usage of social networking services in the school management. In this study, answers were sought for the following research questions:

1. What is the usage frequency of the social networking services by school administrators?
2. What are the positive and negative aspects of using Social Network Services currently used in school management?

## 2. Method

This section is about the model of the study, the study group, data collection and analysis of the collected data.

### 2.1. Research model

The research was designed as a case study which is within the qualitative research methodology in order to determine the positive and negative aspects of social network services in school management. Case studies focusing on how and why (Yin, 1984) is a qualitative research approach whereby researchers examine in depth with the data collection tools such as multiple sources and describe situations and contextual themes (Creswell, 2007).

### 2.2. Study group

In this research which was conducted with some school principals, who have a key task in school management and are at the centre of the communication, a purposeful sampling approach was adopted in the formation of the study group. This approach which is commonly used in qualitative researches (Patton, 2002) requires identifying and selecting an individual or a group of individuals who are particularly knowledgeable or experienced about the field of interest (Cresswell & Plano Clark, 2011). Purposeful random sampling approach, which is one of the purposive sampling strategies, was adopted in choosing the schools and the school principals employed at these schools. In line with this approach, which was adopted to increase the reliability of the study results (Patton, 2002), the principals of 15 different schools at the secondary level were chosen. Within the framework of Turkey's formal education statistics (MEB, 2018), the school principals were chosen by taking into consideration the distribution rate of school type ratios. The information about their gender, age and duration of school management is presented in Table 1.

**Table 1. Distribution of school principals depending on their school type, gender, age and duration of management in schools**

School type	Code	Principal		
		Gender	Age	Duration of management
Anatolian High School	A1	M	42	7
	A2	M	39	3
	A3	F	41	6
	A5	M	55	9
	A5	F	46	6
	A6	M	49	9
	A7	M	51	4
Science High School	F1	M	42	5
	F2	M	45	5
Social Science High School	SBL1	M	56	4
	SBL2	F	38	3
Vocational High School	M1	M	54	10
	M2	M	49	8
	M3	F	43	5
	M4	M	45	6

### **2.3. Data collection**

In the study, more than one data collection techniques were used, basic and supportive (Marshall & Rossman, 2006), and different forms of data were allowed to control, compare and confirm one another in responding the same research question (Patton, 2002). During the stage of basic data collection which was conducted with the use of open-ended questionnaire forms, the school principals were given the forms in which they were supposed to respond to the following questions. In managing your school:

1. Do you use social networking services?
2. What social network services did you benefit from?
3. For what purpose did you use social networking services?
4. What are the advantages of the social networking services you use?
5. What are the disadvantages of using social networking services?

Collected data were analysed and then semi-structured interview process was conducted as a supportive data collection method. With these interviews, it was aimed to find out how the participants perceived, conceptualised and evaluated the event or events related to the subject of the research and how people attributed meaning to the external reality (Greasley & Ashworth, 2007). For this purpose, in line with the questions asked in the open-ended question form, participants provided open and detailed answers with the sub-questions based on the flow of the interview. In this phase of the study, the responses of the participants to the open-ended questions and the consistency in the perception and definition of the answers to the questions during the interview were also examined. The interviews were conducted by the researcher in the schools where the participant school principals worked, and the face-to-face interviews lasted for about 45 minutes and the interviews were recorded upon the permission of the participants.

### **2.4. Data analysis**

In the analysis of the data obtained from the first data collection stage through the open-ended questionnaire, categorical and frequency analysis techniques, which are the types of content analysis, were used. Categorical analysis (Corbin & Strauss, 2007) following the stages of coding of the obtained data, establishing the categories, arranging the categories, identifying and interpreting the findings, was conducted together with the frequency analysis in which intensity and importance of the units in the text were examined (Ryan & Bernard 2000). The consistency of the categories, which was formed after this process where the data were analysed separately by two researchers, was calculated with the Cohen's Kappa coefficient, which tests the reliability between the encoders and is also accepted as a measure of consistency, and as a consequence of that almost a perfect agreement was obtained (Cohen's Kappa = 0.91).

After analysing the data obtained with the open-ended questions, the second stage of the study was conducted through semi-structured interviews. In addition to the notes taken during the interviews, the researchers tried to understand and interpret the feelings and thoughts based on what people said by means of voice recordings which were analysed in written form following the interviews (Smith & Eatough, 2007). Moreover, the consistency between the responses of the participants to the open-ended questions was examined at this stage, and thus the reliability of the data was increased. Following the data collection and analysis, the findings were shared with two researchers as well as another researcher having experience in qualitative coding, and the study was finalised with the agreement of all researchers.

### 3. Findings

The results of the analyses are presented below according to the sub-problem and research methodology. In this section, direct quotations from the written and interview texts are also made and the school principals' statements are presented.

#### 3.1. The findings related to the usage status of social network services in school management

Table 2 presents the findings regarding the school principals' usage of social network services in the school management.

<b>School type</b>	<b>Code</b>	<b>Social network services</b>	<b>Status of usage</b>	<b>Purpose</b>
Anatolian High School	A1	Facebook	Inactive	Promotion of school and announcement
		WhatsApp	Active	Communication among teachers
	A2	Facebook	Inactive	Promotion of school and announcement
		WhatsApp	Active	Communication among teachers
	A3	WhatsApp	Active	Communication among teachers
	A4	WhatsApp	Active	Communication among teachers
	A5	Facebook	Inactive	Promotion of school and announcement
		WhatsApp	Active	Communication among teachers
Science high school	F1	Facebook	Inactive	Promotion of school and announcement
		WhatsApp	Active	Communication among teachers
	F2	WhatsApp	Active	Communication among teachers
Social Science High School	SBL1	Facebook	Inactive	Promotion of school and announcement
		WhatsApp	Active	Communication among teachers
	SBL2	WhatsApp	Active	Communication among teachers
Vocational and Technical Anatolian High School	M1	WhatsApp	Active	Communication among teachers
	M2	Facebook	Inactive	Promotion of school and announcement
		WhatsApp	Active	Communication among teachers
	M3	WhatsApp	Active	Communication among teachers
	M4	WhatsApp	Active	Communication among teachers

Based on the findings from the data that gathered from 15 different school principals, it was found that six of the schools had a Facebook account previously, and these accounts were deactivated and never used again. As the reasons for the opening, Facebook accounts for the schools, the SB1 school principal stated that they used these accounts *“in the promotion of schools and making the school announcements”*. It was found that such accounts were mostly used for the promotion of the schools and making announcements. However, it was observed in the study that all of the Facebook accounts which were used actively in the promotion of the school and announcements in the past were deactivated later. The reason for the deactivation of these accounts was when we asked the principal of the A1 school, *‘It had to be checked constantly and we experienced a few undesirable situations’*. The principal of the M2 school said *‘We couldn’t ensure the page security and we had to deactivate it. Then, the Ministry of Education decided to deactivate the social networks and we did not activate it again’*. Some of the school principals who stated that the privacy and security factors were more effective in the deactivation of the accounts, whereas some of them stated that the decision of the Ministry of National Education regarding the deactivation of the active social media accounts at schools was effective. At this point, the question of how the schools that deactivated their Facebook accounts meet the needs for the promotion of their school and announcements is answered by the A2

school principal; *'We use the school web pages provided by the Ministry of National Education'*. The principals of the schools that never used social networks in the past were asked the question of how the school promotion and announcements related to their schools are made, and similar responses were obtained regarding the usage of the school web pages.

All school principals who used only official web pages for the purpose of making school promotion and announcements stated that they did not use any social network services except WhatsApp application. When the reason for choosing this application was asked to the school principals, the following reasons were declared: its widespread use among teachers, easy use and lack of cost. The A7's explanation is as follows: *'All teachers have a smartphone and can use WhatsApp very comfortably. Also, they do not need to pay any fees, and only the internet connection was needed'*, were the shared reasons by almost all school principals.

### **3.2. Evaluations of school principals regarding the negative and positive aspects of social network services in school management**

This stage of the study was conducted with the school principals stating that they did not use any social network services other than the official web pages for the purpose of making school promotion and announcements and used WhatsApp application for school-related communication. Hence, it aimed to examine specifically the usage of WhatsApp application. The evaluations of the social network service (WhatsApp) used in line with the data obtained in the management of the positive and negative aspects of the school management are presented under the sub-headings in Table 3. In addition to the proportions regarding the school principals' expressions, sample quotations were also presented here.

**Table 3. The opinions regarding the positive and negative aspects of social network service used in school management**

<b>For the use in school management;</b>	<b><i>f</i></b>	<b>%</b>
Positive aspects		
Eliminates the time and space limitation in communication between stakeholders	15	100.0
Fast and secure	14	93.3
Provides resource and material sharing opportunities for the school	14	93.3
Easy to manage with group administrator authorities	13	86.7
Provides a sense of belonging	8	53.3
Negative aspects		
Unnecessary correspondence	12	80.0

It was found out that the school principals were very positive about the usage of WhatsApp in school management. In particular, it appears that using WhatsApp eliminates the time and space limitation in communication with other managers, teachers and other employees within the schools. M3 school principal relevantly stated as follows; *'All my colleagues in the school use WhatsApp, and through this application, I can reach everyone that I want to reach at any time.'* And, this response is a commonly shared response by almost all principals. The fact that WhatsApp application is fast and secure is also one of the positive characteristics compared with the other social network services. It is seen that the majority of school principals agree with the expression delivered by the A5 school principal, which is; *'It is faster and more secure in communication than other social networks I use in daily life'*.

It is also observed that the school principals are also largely in agreement that WhatsApp application contributes to the sharing of school-related resources and materials. Regarding this point, the SB2 school principal suggested as follows; *'Sometimes the sharing of materials can be quite busy at the school, and it is not possible to reach all the colleagues. In this case, if there is a need to share certain information or document, I send the photos through WhatsApp'*, which is also shared by all

other school principals. As a result of the screenshot taken from the school principal F1 (Figure 1), information and document sharing can be made through the application that supports different types of file sharing (Picture, PDF, Word, Text, etc.).

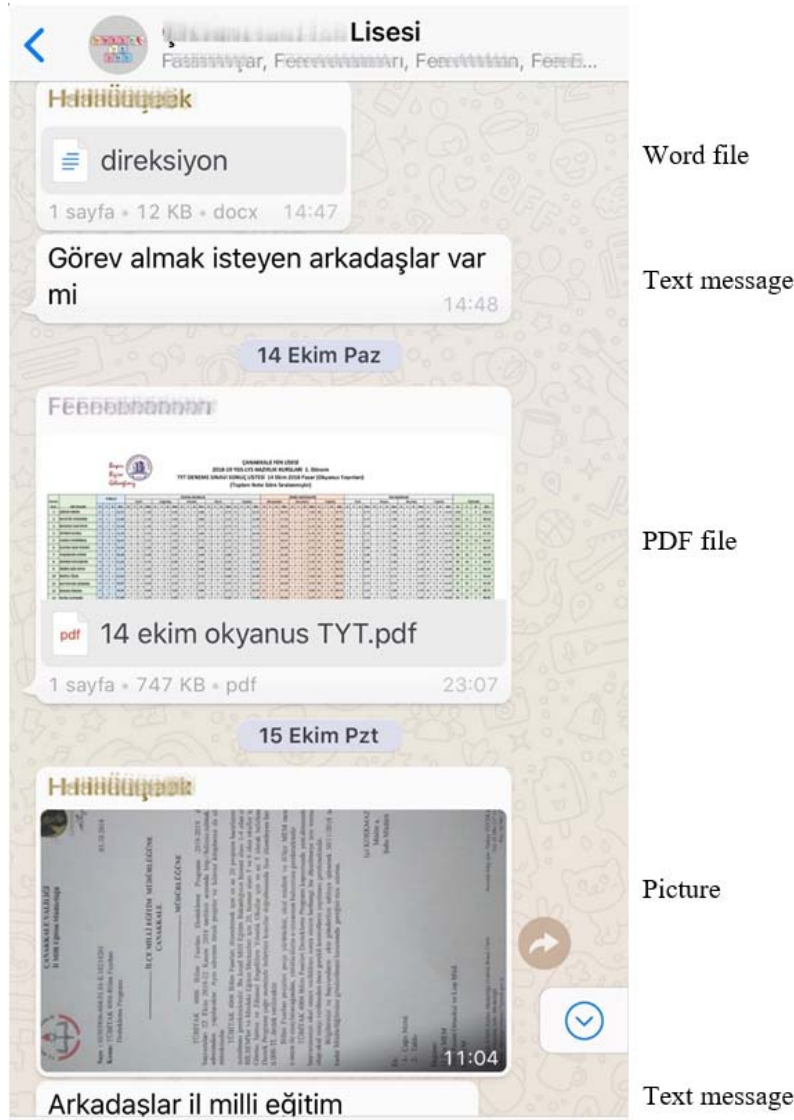


Figure 1. Sample message

The power given to group admin by WhatsApp application and the widespread use of this application in school management is considered to be among the positive aspects of this application. As M1 school principal expressed *'I can control the group; the newcomers and leavers and I can also control who can access to the posts on the application'*. Such advantages such as effective control of the sharings within the group as well as the organisation of the group are agreed by the great majority of the school principals. Moving beyond the physical boundaries of the school culture through the WhatsApp application and contributing positively to the sense of belonging are the points emphasised by the school principals. As seen in the expressions of A2 school principal *'We do not know much about each other because of the time-related constraints in face-to-face meetings. Through the WhatsApp group, we can share what we can't share at school'*. As in this statement, it is seen that WhatsApp has led to the combined use of the school and the sense of belonging together.

In the study, some of the school principals stated that they could have negative experiences besides the contributions of WhatsApp. It was found that there was a lot of sharing, especially on special days or celebrations as well as having sharings that do not concern the school or other group members. It was seen that the school principals could intervene as the group manager. These interventions could be in the form of warning as seen in the expression of the principal of A3 *'Unnecessary things can be shared and I need to warn.'* Sometimes the intervention could be in the form of restriction and blocking as seen in the expression of the principal SB2 *'...It happened that I had to block further sharing in the group, and it was only me who shared things in the group.'* In general, these negativities, which are described as unnecessary correspondence, reveal that school principals are able to cope with and manage the WhatsApp application as a group manager.

#### **4. Results and discussion**

The results of the study which was conducted to find out the positive and negative aspects of the usage of social networking services in school management, sub-problem and research methodologies are presented below.

##### ***4.1. The results and the discussions regarding the use of social network services in school management***

As a result of the study, conducted with the school principals, to examine the use of social networking services in school management, it was found that some of the schools previously had a Facebook account, and then these accounts were deactivated and not activated again. In the deactivation of Facebook accounts, which were mostly used for the purpose of the promotion of the school and announcements, it was found that the Ministry of National Education had an effect on the restriction of the access to Facebook at schools as well as some other privacy and security-related reasons. The school principals continued to meet their needs for the promotion of the school and announcements through the school web pages presented with the infrastructure provided the Ministry of National Education. The school principals who did not benefit from any social network services before were also found to use the school web pages whose infrastructure was provided by the Ministry of National Education in the promotion of their schools and announcements. It was seen that all of the school principals, who were found not to use any means other than the official web pages, used WhatsApp application to communicate with other managers and teachers.

WhatsApp, which enables collaborative synchronous and asynchronous communication with multimedia support, is widely accepted as an instant messaging application with social networking features (Cetinkaya, 2017a; Fischer, 2013). WhatsApp, which is one of the most preferred mobile-based messaging applications, started to be used in educational environments and the number of studies conducted on this application has started to increase rapidly (Cetinkaya, 2017a, 2107b; Cetinkaya & Sutcu, 2018). The studies conducted to examine its effects on the interaction and vocational cooperations are noteworthy (e.g., Al-Daihani, Al-Qallaf & AlSaheeb, 2018; Giordano et al., 2015; Hayward & Ward, 2018; Johnston et al., 2015; Sarode et al., 2018; Wani, Rabah, Alfadil, Dewanjee & Najmi, 2013). Although most of the studies focused on professional sharing and their effects on medicine, there are some studies examining the effects of the application in other professional groups. The findings of this study suggest that the school principals used the WhatsApp application in the interaction processes with the other stakeholders of the school.

##### ***4.2. The results and the discussions regarding the negative and positive aspects of social network services in school management***

As a result of the study, it was found that all school principals used the WhatsApp application in communication with other administrators and teachers at the school, and they did not benefit from any other social network services in the management of their schools. At this point, the study



specifically focused on the WhatsApp application and it was found that the school principals were very positive regarding the use of WhatsApp in the management of schools. School principals have a common view that using WhatsApp eliminates the limitation of time and space in communication with other managers, teachers and other employees within the school. In the WhatsApp-specific study, this situation is also associated with the advantages of mobile technologies and emphasises that the application eliminates the limitations in communication with regards to time and space (e.g., Bouhnik & Deshen, 2014; Cetinkaya, 2017b; Cetinkaya & Sutcu, 2018; Church & de Oliveira, 2013; Nguyen & Fussell, 2016).

The fact that WhatsApp is faster and safer is the positive feature that school principals suggest in comparison with the other social networking services. In the study carried out by Cetinkaya (2017a), it was found that since the application works on the mobile lines, it reduces the risk of theft of the account and the possibility of being connected by others via fake accounts. Thus, it becomes more secure than other social networks. Confidentiality and security concerns, which are seen as an important problem in other social networking services (e.g., Cain & Policastri, 2011; Cetinkaya & Sutcu, 2018; Muñoz & Towner, 2011; Young & Quan-Haase, 2009) were found to have an effect on choosing WhatsApp application as a means of communication (e.g., Bouhnik & Deshen, 2014; Cetinkaya, 2017a; Church & De Oliveira, 2013; Johnston et al., 2015). It was also observed that the idea that the application was fast and secure was also effective in opting for WhatsApp as a source of communication and resources at schools. It was found that the application, which is used for sending documents when necessary, is also advantageous in sharing different types of files (Photo, Video, PDF, Word, etc.) In addition, the school principals also stated that they could control whether the sent messages and documents were seen by the receivers or not. They also stated that the application provided the group manager convenience in the management of the group due to the power given to the group admins. It was found that this also contributed positively to the proper use of the application and led school principals to the use of the application.

The fact that WhatsApp groups extended the physical boundaries of schools and contributed to the sense of belonging is another important contribution of the application, which was also emphasised by the school principals. The potential of the social networking services to increase the sense of belonging and loyalty is also one of the factors emphasised in the studies conducted in the field (e.g., Cetinkaya, 2017a, 2017b; Junco, 2012; Junco, Heiberger & Loken, 2011). In the studies conducted specifically on WhatsApp reveal that the application has a significant contribution to within group communication and support groups, and this can also contribute positively to the sense of belonging (e.g., Bouhnik & Deshen, 2014; Cetinkaya, 2017a, 2017b; Johnston et al., 2015). No matter how well-planned the change strategy is, teachers tend to trust and be influenced by their colleagues, rather than believing in a manager, expert or academician out of their school environments (Daly, 2010). However, it is inevitable that there are conflicts or problems in the virtual environment as well as in face-to-face communication when a human being is involved (Cetinkaya, 2017a). As a matter of fact, misunderstandings (Akarasriworn, 2011), inter-group disputes may arise because of different reasons such as exceeding professional boundaries in relations (Muñoz & Towner, 2011). As a result of the study, some of the school principals stated that they might face such negative situations.

It was found in the study that there were a lot of sharings which do not concern most group members, and the number of sharings increases, especially on special days or celebrations, which is considered as a problem by group members. It is seen that the school principals can intervene in such problems as the group admin. While these interventions can sometimes be made in the form of warnings, it can sometimes be in the form of blocking or restriction of access. In general, these negativities, which are described as unnecessary correspondence, reveal that school principals are able to cope with and manage the WhatsApp application as the group managers. In fact, the behaviours of the school principals that result from their personal and leadership characteristics can affect the school culture and their communication with the other employees of the school (Karadag & Arslanargun, 2015; Sisman, 2015;). At this point, it is possible to talk about the technical advantages of

the authority of the group manager provided by WhatsApp application as well as the impact of the communication skills of the school principals.

## 5. Suggestions

As in many other studies, the results of this study reveal that technology has a significant effect on the formation of different forms of communication. Although the communication between individuals in text format is considered to be a very old method, the technology has extended its functions to different dimensions by providing additional multimedia support to this communication method. In addition to daily communication, it has also started to make people feel its effects on everyday life, education and professional associations. As suggested in this study, these applications have started to become effective tools in the management of these processes as well as education-teaching processes.

It is also possible to suggest that WhatsApp and similar social networking services have the potential to be used in the management of schools. Based on the results obtained from this research, the following suggestions can be made:

- Technologies and accompanying applications could be used by individuals in school management,
- More experimental studies could be performed to verify the qualitative data in line with the results based on the data obtained from the school principals.

## References

- Akarasriworn, C. (2011). *Students' knowledge construction and attitudes toward synchronous video conferencing in an online collaborative problem-based learning environment* (Doctoral dissertation). University of Northern Colorado, Colorado. Retrieved from <http://search.proquest.com/docview/919523309?accountid=11054>
- Al-Daihani, S. M., Al-Qallaf, J. S. & AlSaheeb, S. A. (2018). Use of social media by social science academics for scholarly communication. *Library Review*, 67(6/7), 412–424. doi:10.1108/GKMC-11-2017-0091
- Arteaga Sanchez, R., Cortijo, V. & Javed, U. (2014). Students' perceptions of Facebook for academic purposes. *Computers & Education*, 70, 138–149. doi:10.1016/j.compedu.2013.08.012
- Bakkenes, I., de Brabander, C. J. & Imants, J. G. M. (1999). Teacher isolation and communication network analysis in primary schools. *Educational Administration Quarterly*, 35, 166–202. doi:10.1177/00131619921968518
- Borgatti, S. P. & Ofem, B. (2010). Overview: social network theory and analysis. In A. Daly (Ed.), *Social network theory and educational change* (pp. 17–30). Cambridge, UK: Harvard Education.
- Bouhnik, D. & Deshen, M. (2014). WhatsApp goes to school: mobile instant messaging between teachers and students. *Journal of Information Technology Education: Research*, 13, 217–231. doi:10.28945/2051
- Boyd, D. M. & Ellison, N. B. (2007). Social network sites: definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230. doi:10.1111/j.1083-6101.2007.00393.x
- Boyd, S. (2003). *Are you ready for social software?* [Blog post]. Retrieved from <http://www.stoweboyd.com/post/2325281845/are-you-ready-for-social-software>
- Cain, J. & Policastri, A. (2011). Using Facebook as an informal learning environment. *American Journal of Pharmaceutical Education*, 75(10), Article 207. doi:10.5688/ajpe7510207
- Cetinkaya, L. (2017a). An educational technology tool that developed in the natural flow of life among students: WhatsApp. *International Journal of Progressive Education*, 13(2), 29–47. Retrieved from <http://files.eric.ed.gov/fulltext/EJ1145590.pdf>
- Cetinkaya, L. (2017b). The impact of WhatsApp use on success in education process. *The International Review of Research in Open and Distributed Learning*, 18(7), 59–74. doi:10.19173/irrodl.v18i7.3279

- Cetinkaya, L. & Sutcu, S. S. (2018). The effects of Facebook and WhatsApp on success in English vocabulary instruction. *Journal of Computer Assisted Learning*, doi:10.1111/jcal.12255
- Christakis N. A. & Fowler, J. H. (2011). *Connected: the surprising power of social networks and how they shape our lives* (Reprint edition). New York, NY: Back Bay Books.
- Church, K. & de Oliveira, R. (2013). What's up with WhatsApp? *Comparing mobile instant messaging behaviors with traditional SMS*. Proceedings of the 15th International Conference on Human-computer Interaction with Mobile Devices and Services (pp. 352–361). New York, USA: ACM. doi:10.1145/2493190.2493225
- Corbin, J. M. & Strauss, A. C. (2007). *Basics of qualitative research: techniques and procedures for developing grounded theory*. Thousand Oaks, CA: SAGE Publications.
- Creswell, J. W. (2007). *Qualitative inquiry & research design: choosing among five approaches* (2nd ed.). Thousand Oaks, CA: SAGE Publications.
- Creswell, J. W. & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: SAGE Publications.
- Daly, A. J. (2010). *Social network theory and educational change*. Cambridge, UK: Harvard University.
- Dunne, A., Lawlor, M. A. & Rowley, J. (2010). Young people's use of online social networking sites: a uses and gratifications perspective. *Journal of Research in Interactive Marketing*, 4(1), 46–58. doi:10.21427/D7WV31
- Er, E. & Calik, T. (2017). The relationships between primary school teachers' social network tendency and perceptions on social network structure of the school. *Gazi Üniversitesi Gazi University Journal of Gazi Educational Faculty*, 37(3), 1061–1083. doi:10.17152/gefad.338136
- Fischer, Y. (2013). *The Facebook is dead—long live WhatsApp*. De Marker. Retrieved from <http://www.themarker.com/technation/1.2126492>
- Giordano, V., Koch, H., Mendes, C., Bergamin, A., de Souza, F. & do Amaral, N. (2015). WhatsApp Messenger is useful and reproducible in the assessment of tibial plateau fractures: inter- and intra-observer agreement study. *International Journal of Medical Informatics*, 84(2), 141–148. doi:10.1016/j.ijmedinf.2014.11.002
- Goodband, J. H., Solomon, Y., Samuels, P. C., Lawson, D. & Bhakta R. (2012). Limits and potentials of social networking in academia: case study of the evolution of a Mathematics Facebook Community. *Learning, Media and Technology*, 37(3), 236–252. doi:10.1080/17439884.2011.587435
- Greasley, K. & Ashworth, P. (2007). The Phenomenology of “approach to studying: The University Student's Studies within the Lifework. *British Educational Research Journal*, 33(6), 819–843. doi:10.1080/01411920701656977
- Hayward, E. & Ward, A. (2018). Virtual learning communities for faculty members: does WhatsApp work? *Medical Education*, 52(5), 569. doi:10.1111/medu.13559
- Johnston, M., King, D., Arora, S., Behar, N., Athanasiou, T., Sevdalis, N. & Darzi, A. (2015). Smartphones let surgeons know WhatsApp: an analysis of communication in emergency surgical teams. *American Journal of Surgery*, 209(1), 45–51. doi:10.1016/j.amjsurg.2014.08.030
- Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, 58, 162–171. doi:10.1016/j.compedu.2011.08.004
- Junco, R., Heiberger, G. & Loken, E. (2011). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning*, 27, 119–132. doi:10.1111/j.1365-2729.2010.00387.x
- Karadag, E. & Arslanargun, E. (2015). Okullarda Guc ve Politika. In W. K. Hoy & C. G. Miskel (Eds.), *Educational administration: theory, research, and practice* (Trans. Ed.: S. Turan, pp. 202–237). Ankara, Turkey: Nobel Akademik Yayıncılık.
- Marshall, C. & Rossman, G. B. (2006). *Designing qualitative research* (4th ed.). Thousand Oaks, CA: SAGE Publications.
- MEB (2018). *Milli Eğitim İstatistikleri, Orgun Eğitim 2017–2018*. T.C. Ankara, Turkey: Milli Eğitim Bakanlığı Strateji Gelistirme Başkanlığı. Retrieved from [http://sgb.meb.gov.tr/meb\\_iys\\_dosyalar/2018\\_09/06123056\\_meb\\_istatistikleri\\_orgun\\_egitim\\_2017\\_2018.pdf](http://sgb.meb.gov.tr/meb_iys_dosyalar/2018_09/06123056_meb_istatistikleri_orgun_egitim_2017_2018.pdf)
- Munoz, C. L. & Towner, T. (2011). Back to the “wall”: how to use Facebook in the college classroom. *First Monday*, 16(12). doi:10.5210/fm.v16i12.3513

- Nguyen, D. T. & Fussell, S. R. (2016). Effects of conversational involvement cues on understanding and emotions in instant messaging conversations. *Journal of Language & Social Psychology*, 35(1), 28–55. doi: 10.1177/0261927X15571538
- Papacharissi, Z. & Mendeson, A. (2011). Toward a new(er) sociability: Uses, gratifications and social capital on Facebook. In S. Papathanassopoulos (Ed.), *Media perspectives for the 21st century* (pp. 212–231). London, UK: Routledge.
- Patton M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- Rowicki, M. A. (1999). *Communication skills for educational administrators*. East Lansing, MI: National Center for Research on Teacher Learning. Retrieved from <http://files.eric.ed.gov/fulltext/ED432830.pdf>
- Ryan, G. & Bernard, H. R. (2000). Data management and analysis methods. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (pp. 769–802). Thousand Oaks, CA: SAGE Publications.
- Sarode, S. C., Sarode, G. S., Gaikwad, T., Patekar, D., Gadail, A., Gondivkar, S., Panta P. & Patil, S. (2018). Usage analysis of WhatsApp for dentistry-related purposes among general dental practitioners. *The Journal of Contemporary Dental Practice*, 19(10), 1267–1272. doi:10.5005/jp-journals-10024-2415
- Selwyn, N. (2009). Faceworking: exploring students' education-related use of Facebook. *Learning, Media and Technology*, 34(2), 157–174. doi:10.1080/17439880902923622
- Smith, J. A. & Eatough, V. (2007). Interpretative Phenomenological Analysis. In E. Lyons ve A. Coyle (Eds.). *Analysing Qualitative Data in Psychology* (pp. 35-50). Los Angeles, CA: SAGE Publications.
- Sisman, M. (2015). Okullarda Yapi. In W. K. Hoy & C. G. Miskel (Eds.), *Educational administration: theory, research, and practice* (Trans. Ed.: S. Turan, pp. 82–125). Ankara, Turkey: Nobel Akademik Yayıncılık.
- Wani, S., Rabah, S., Alfadil, S., Dewanjee, N. & Najmi, Y. (2013). Efficacy of communication amongst staff members at plastic and reconstructive surgery section using smartphone and mobile WhatsApp. *Indian Journal of Plastic Surgery*, 46(3), 502–505. doi:10.4103/0970-0358.121990
- Yin, R. (1984). *Case study research: design and methods* (3rd ed.). California, CA: SAGE Publications.
- Young, A. L. & Quan-Haase, A. (2009). *Information revelation and internet privacy concerns on social network sites: a case study of Facebook* (pp. 265–274). Proceedings of the fourth international conference on communities and technologies. Pennsylvania, CA: ACM.
- Ziegler, S. G. (2007). The (mis) education of generation. M. *Learning, Media and Technology*, 32(1), 69–81. doi:10.1080/17439880601141302