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## To-friend or not-to-friend with teachers on SNSs: University students' perspectives

## Ser o no ser amigos de los profesores en redes sociales: Las perspectivas de los estudiantes universitarios

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### Abstract

A large majority of university students use social networking sites (SNS) actively. Nevertheless, there are very limited studies examining students' perceptions about student-teacher relationships in SNSs comprehensively. The purpose of this research was to investigate university students' perceptions about interacting with their teachers in SNSs, and to this end an exploratory mixed-methods design was utilised. Qualitative data were collected from 21 students via interviews, and quantitative data from 1,324 students in 19 universities in Turkey via a questionnaire. Content analysis, descriptive analysis and principal component analysis methods were used to analyse the data. The content analysis contributed to the formulation of the questionnaire items. The principal component analysis yielded the following four dimensions: perceived utility, perceived barriers, perceived favourable teacher behaviours, and perceived unfavourable teacher behaviours. The most prominent finding is that the students were mostly opposed to their teachers' sharing their political and religious views; however, they were in favour of teachers sharing information about their personal life. Despite some students displaying some hesitation, especially concerning the level of respect between them, the majority of students had a positive outlook towards teacher-student friendships. The students indicated that being friends on SNSs would increase their motivation towards the course.

### Resumen

La gran mayoría de los estudiantes universitarios utilizan activamente las redes sociales (RRSS). Sin embargo, hay estudios limitados sobre las percepciones de estos con base en la relación estudiante-profesor en RRSS. El propósito de esta investigación fue investigar las percepciones de los estudiantes universitarios



sobre la interacción con sus profesores en redes sociales. Para este fin se empleó un diseño exploratorio mediante métodos mixtos. Se recopilaron datos cualitativos de 21 estudiantes por medio de entrevistas y datos cuantitativos de 1.324 sujetos en 19 universidades de Turquía mediante cuestionario. Para analizar los datos se aplicaron análisis de contenido, análisis descriptivo, y análisis de componentes principales. El primero contribuyó a la formulación de los ítems del cuestionario. El análisis del componente principal arrojó cuatro dimensiones: utilidad percibida, barreras percibidas, comportamientos docentes percibidos como favorables y desfavorables. El hallazgo más destacado fue que los estudiantes se opusieron principalmente a que sus profesores compartieran sus puntos de vista políticos y religiosos. No obstante, estaban a favor de que los docentes compartieran información sobre su vida personal. A pesar de que algunos estudiantes mostraron dudas, especialmente con respecto al nivel de respeto entre ellos, la mayoría del alumnado tenía una perspectiva positiva hacia las amistades profesor-alumno. Estos indicaron que ser amigos en las redes sociales aumentaría su motivación hacia el curso.

## Keywords / Palabras clave

Social networking, student-teacher relationship, university student, teacher, interaction, communication, self-disclosure, privacy.

Redes sociales, relación profesor-alumno, estudiante universitario, profesor, interacción, comunicación, autorrevelación, privacidad.

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## 1. Introduction

Improvements in the Internet and technology have introduced new communication tools and styles. In particular, social networking sites (SNSs) have become some of the outstanding communication tools in this era (Hershkovitz & Forkosh-Baruch, 2017; Ito et al., 2009). With the emergence of social networking websites, such as Facebook, MySpace, and Twitter, students and teachers have started to connect outside school (Elhay & Hershkovitz, 2019; Puzio, 2013). SNSs are seen as important communication and educational tools for school and school-related issues in higher education settings (Greenhow et al., 2014). For example, students can be asked questions outside the classroom via social media, interact with their peers and teachers, and engage in discussions about the course. However, despite the prevalence of the use of SNSs and their possible educational benefits, educators have some concerns about using these websites in their professional practice (Puzio, 2013), especially related to privacy issues (Hershkovitz & Forkosh-Baruch, 2013). Therefore, with the widespread use of technology in education, it is important to understand the ways in which technology affects the interaction between students and teachers (Harper, 2018).

## 2. Literature review

### 2.1. Teacher-student relationship

Teacher-student relationships play an important role in students' academic development and affect the school and classroom environment (Hershkovitz, 2019; Song et al., 2019). Researchers focusing on student-teacher relationships on SNSs point to both positive and negative issues. For example, Callaghan and Bower (2012) reported that the student-teacher interaction in SNSs correlated with students' achievements and engagement levels. Hershkovitz and Forkosh-Baruch (2013) found that although communication between students and the teacher was limited, the students considered positive student-teacher relationships on SNSs as useful and supported in-class satisfaction. However, some research studies underlined the negative aspects of SNSs. Butler (2010), for instance, referred to inappropriate comments posted on SNSs. Mazer et al. (2007) explored not only the contents of the comments but also how the amount of shared information might affect the perceptions of SNS users. They found that increased number of informal photographs shared by teachers could affect student perceptions negatively.



Teachers can easily manage how much information they want to share about their private lives in their classroom communication; for example, they can create a privacy boundary for their in-class communication (McBride & Wahl, 2005). However, social media differs from traditional communication environments in that it is not an official teaching environment; therefore, teachers tend to share or express themselves freely because they assume that they are not in a formal environment. It is obvious that in-person communication differs from communication over SNSs, in which the boundaries of professional and personal life can be unclear (Carter et al., 2008). In this formal classroom environment, privacy management is easier for both teachers and students. Maintaining the balance between academic and personal life on SNSs is difficult and can be ambiguous, sometimes causing school authorities and policy makers to ban student-teacher relationships in this type of media (Manca & Ranieri, 2017). For example, the United States of America, Israel, and Australia have implemented policies from time to time to forbid these interactions but, in fact, there is no empirical evidence to support these actions (Herskovitz & Forkosh-Baruch, 2017). Considering the prevalence of SNSs, adopting a banning strategy is not the optimal solution; rather, in this pervasive digital era, it is better to understand the student-teacher relationship in SNSs, which could be achieved through developing Media and Information Literacy (MIL) (Buckingham, 2007). Teachers should be able to determine how much information to unveil in SNSs in order to preserve their credibility and avoid possible negative perceptions that students might construct. Regulations might have some impacts on students but scholarly studies are insufficient in this area (Veletsianos et al., 2013).

## 2.2. Self-disclosure and credibility

The definition of self-disclosure according to Mazer et al. (2009) is “any message about the self that a person communicates to another”. Teacher self-disclosure is viewed as a strong personal source of student-faculty communication (Fusani, 1994). Sorensen (1989) stated that there was a positive relationship between student perceptions of affective learning and teacher self-disclosure. Therefore, it can be said that teacher self-disclosure can contribute to student learning (Song et al., 2019). Self-disclosure can establish a supportive learning environment and facilitate various forms of communication between students and teachers (Cayanus & Martin, 2004). As discussed above, student-teacher communication has extended beyond the classroom, blurring the boundaries. For this reason, Buckingham (2007) stated that utilisation of digital technologies should be approached from a pedagogical perspective. This approach should help both teachers and students manage their communication processes, and in this way, students will gain skills and competencies on how to communicate with their friends and teachers. The amount and relevance of self-disclosure are critical components of communication since there are studies claiming that an increase in teachers’ self-disclosure results in students’ uncivil behaviours (Trad et al., 2012).

Self-disclosure is a kind of friendly communication which positively affects student participation and raises teacher credibility (Cayanus & Martin, 2008). There is a moderate association between teacher credibility and teacher behaviours, such as humour, technology use, and aggressive messages (Finn et al., 2009). When students perceive their teacher as less credible, their motivation decreases, and they show less respect to their teacher. As a result of the combination of these elements, student learning is decreased. Therefore, teachers’ credibility is the key factor in attaining successful student communication.

Various studies have shown that students’ learning is positively affected when they attribute high credibility to their teachers (Frymier & Thompson, 1992; McCroskey et al., 2004); however, SNS communication as a way of establishing friendships between teachers and students may impact on the boundaries of personal and professional life negatively in terms of credibility. For example, Barber and Pearce (2008) argued that the teacher’s presence on Facebook affected teacher credibility adversely, and it was not only their presence but also what was shared that could possibly have an effect on perceptions towards teachers. For instance, if a student is exposed to unwanted photos of the teacher on Facebook, this can affect the teacher’s credibility negatively (Hutchens &



Hayes, 2014; Johnson, 2015). Since excessive disclosure can decrease teacher's credibility, contrary to what Mazer et al. (2009) reported that self-disclosure increases teacher credibility, teachers should pay attention to the type of information they share and the amount of disclosure they have with students (Johnson, 2015).

Communication practices between teachers and students and how they perceive each other's behaviours on SNSs needs further investigation (Manca & Ranieri, 2015; 2017). Some research reveals that students prefer passive behaviours while interacting with their teachers and avoid active interactions, such as chatting, commenting, and posting (Aydin, 2014). Understanding why learners enact this behaviour would reveal how SNS-based friendships can be utilised for better communication. Thus, it is important to explore teacher-student friendship on SNSs to determine how students perceive their teachers' use of SNSs and how teachers should use these social interaction tools.

### 3. Methodology

#### 3.1. Research aim and research questions

The existing research mostly focuses on use of SNSs for academic purposes. In general, studies report the effects of usage or non-usage of SNSs on students' achievement and the use of SNSs as communication tools for teaching and learning processes (Froment et al., 2017). There is a well-documented doctoral dissertation (Plew, 2011) pertaining to Facebook friendships between teachers and students from the teachers' perspective. However, there are very few comprehensive studies examining students' perceptions towards student-teacher relationships on SNSs. Therefore, this study is important for teachers, policy makers, and school authorities in relation to creating new regulations, policies or guidelines on student-teacher relationships on SNSs. With the purpose of analysing the factors that affect student-teacher relationship on SNSs, this study addressed the following research questions:

- 1) What are the students' views about the student-teacher interaction in SNSs?
- 2) What type of posts do students want their teachers to share and not to share?
- 3) What type of actions do students expect from their teachers on SNSs?
- 4) What are the factors that affect the student-teacher relationship on SNSs?

#### 3.2. Research design

This study used a mixed-methods approach with an exploratory sequential design (Creswell, 2011). In this context, qualitative data collection and an analysis shaped quantitative data collection tool were utilised; therefore, the interview results emerging from the first phase of the study assisted in developing the instrument of the second phase of the study. In such exploratory research design, researchers often try to understand a situation using a qualitative research group with the aim of developing a quantitative instrument based on the obtained qualitative data. The final aim is to test and generalize the findings of the first phase of the study via a large number of participants. The priority of this study was quantitative, with a greater emphasis being placed on quantitative methods.

#### 3.3. Participants

In the qualitative phase, there were 21 university students attending a large state university in Turkey. The participants in the quantitative phase comprised 1,324 university students from 19 different universities in Turkey. Descriptive data about the participants obtained from the qualitative and the quantitative phases are summarised in Table 1. The participants were selected via convenience sampling method. The immediate academic colleagues of the researchers were the main sources for finding the participants. The participants were undergraduates ranging from



freshmen to seniors aged from 18 to 23 years, attending various departments of different faculties (education, law, engineering, sport sciences, communication, and so on).

**Table 1. Frequency distribution of genders by data source**

| Gender | Qualitative Data | Quantitative Data | Total |
|--------|------------------|-------------------|-------|
| Male   | 7                | 445               | 452   |
| Female | 14               | 879               | 893   |
| Total  | 21               | 1,324             | 1,345 |

### 3.4. Data collection and analysis

The primary data collection tool was the semi-structured interview developed by the researchers. To ensure the validity of the data collection tool, two experts were consulted and two other researchers from the same academic field reviewed the open-ended questions. According to their feedback, the interview questions were modified and finalised. Examples of the interview questions are: “What do you think about being friends with your teachers on social networks? Can you elaborate on your response?” and “What kind of content should or should not be shared by your teachers on social networks?”.

The qualitative data were analysed with the content analysis method (Strauss & Corbin, 1990). The qualitative data of the study were transcribed, segmented, and coded (Johnson & Christensen, 2004). The researchers organised the codes and interpreted the findings to form the items of the data collection instrument of the second phase (Yıldırım & Şimşek, 2005). The qualitative data were analysed by two researchers for inter-rater reliability.

The second data collection tool was the questionnaire used to obtain the quantitative data of the study. The questionnaire was developed based on the scale development stages recommended by DeVellis (2003). The first step was to create an item pool based on the interview results and the researchers’ experiences. The questionnaire was determined to be a five-point Likert scale. Then, the questionnaire items were evaluated by field experts in terms of validity and clarity. An exploratory factor analysis (EFA) was applied to group-related items, and five items were removed. Thus, the questionnaire was finalised with 17 items. In order to determine the factor pattern coefficients, the quantitative data were analysed via the principal components analysis (PCA), which “simplifies the complexity in high-dimensional data while retaining trends and patterns” (Lever et al., 2017: 641). The suggestion of Thompson (2004) that noteworthy factors should have eigenvalues greater than 1.0, which is also known as the K1 rule, was applied.

## 4. Results and analysis

### 4.1. Qualitative results

As summarized in the dataset (<http://bit.ly/33kFVcB>), the interviews with the students revealed their views and assisted in the development of the items in the questionnaire. The most prominent finding is that according to the students, political and religious views should not be shared by teachers. This finding is also included in the quantitative phase as two separate items, as explained in the next sub-chapter.

Additionally, some students did not want to be friends with their teachers on SNSs because they believed that being friend with a teacher on social media would probably affect the level of respect between them negatively. On the other hand, more than half of the students saw being a friend with their teachers on SNSs as a positive contribution to their daily interaction. In addition, the students thought that SNSs increased communication between students and teachers.





## 4.2. Quantitative results

EFA was conducted to ensure the construct validity of the instrument using IBM SPSS v. 20. The result shows that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.87, suggesting the absence of multi-collinearity. A KMO greater than .50 is considered acceptable, a value above .80 is commendable (Kaiser, 1974), and values closer to 1 indicate a better correlation between variables (Norusis, 1998). Bartlett's test for sphericity was performed, and the approximate chi-square was 11058.274,  $p < .000$ . These two tests showed that factorial analysis was appropriate for this set of data. PCA with Varimax rotation was used to reveal the factor loadings. Four factors emerged from the data: The first factor, consisting of four items, was labelled as "perceived utility", the second factor (seven items) as "perceived barriers", the third factor (two items) as "perceived unfavourable teacher behaviours", and the last factor (four items) as "perceived favourable teacher behaviours". The factorial loadings, mean and standard deviation of the items are presented in dataset (<http://bit.ly/2XIBIOy>).

Table 2 presents the four noteworthy factors with an Eigenvalue greater than 1, as suggested by Guttman (1954, cited in Thompson, 2004). The satisfactory reliability values of the factors of the scale ranged from 0.72 to 0.91, and that of the whole scale was 0.83. The highest variance (34.69%) belonged to the perceived barriers factor and the lowest variance (7.83%) to the perceived unfavourable teacher behaviours. The percentages of variance explained by the remaining two factors were 15.35% for perceived utility and 9.43% for perceived favourable teacher behaviours. The four factors accounted for 67.30% of the total variance.

**Table 2. Descriptive statistics for factors and items**

| Factor                                    | Cronbach alpha | Eigenvalue | Explained variance (%) | Cumulative % |
|---|----------------|------------|------------------------|--------------|
| Perceived utility                         | 0.91           | 5.89       | 34.69                  | 34.69        |
| Perceived barriers                        | 0.83           | 2.60       | 15.34                  | 50.05        |
| Perceived favourable teacher behaviours   | 0.72           | 1.60       | 9.43                   | 59.47        |
| Perceived unfavourable teacher behaviours | 0.80           | 1.33       | 7.83                   | 67.30        |

## 5. Discussion

In this era, SNSs have become a part of most people's daily routine, including university teachers and students. The positive aspects of SNSs, especially in terms of classroom practices for teaching and learning (Aydin, 2012; Gao et al., 2012; Tess, 2013) have been mostly studied; however, research into the communicative and socialisation issues of SNSs focusing on the friendship of the teacher and student are very limited. In this framework, this study focused on a comprehensive examination of the students' perceptions concerning the student-teacher relationship on SNSs. The students' responses in relation to the four research questions are presented below.

What are the students' views about student-teacher interaction on SNSs? Based on the qualitative findings, more than half of the students thought positively about student-teacher friendship on SNSs. Although from a different education level, our finding is parallel to Hershkovitz and Forkosh-Baruch's (2013) study, which found that secondary school students wanted to befriend their teachers. Additionally, the students indicated that being a friend with their teachers on social media had a positive contribution to their communication with them. The students perceived SNSs as a facilitating factor for the communication between students and teachers. Research studies claim that SNSs could be a contributing tool for improving learning and communication with students (Kleinglass, 2005, cited in Kolek & Saunders, 2008). Similarly, our research findings showed that more than half of the students claimed that being a friend with their course teachers on SNSs increased their communication with them.



The literature mainly reports that for the majority of students, communication via SNSs is appropriate; however, for a minority of students, communication via SNSs was unwanted (Miron & Ravid, 2015). According to Hutchens and Hayes (2014), students prefer to use Facebook for instructional purposes, but they (73%) do not approve of friendship on SNSs mainly due to privacy concerns. This study also revealed some privacy issues about teacher-student relationship, with the most prominent being that some students indicated that teachers should not share contents about their political and religious views. Five of the students believed that being a friend with their teachers would negatively affect the level of respect between them. The finding showing that the students indicated they did not want to be friends with their teachers on SNSs because they thought that being a friend would negatively affect the level of respect can be explained by some kind of behaviours in Turkish culture being considered as disrespectful. This finding indicates that the students may have given their responses based on thinking that their communication with their teachers would be very informal, and therefore perceived them as discourteous. From the teachers' perspective, Göktas (2015) revealed a similar issue, stating that some active students' behaviours, such as chatting, posting, and poking "can be considered disrespectful by their teachers in Turkish culture". Furthermore, some teachers want the student-teacher relationship to be more formal (Akkoyunlu et al., 2015).

What are the factors that affect student-teacher relationship on SNSs? According to the quantitative findings, the following four factors affected student teacher friendship on SNSs: perceived utility, perceived barriers, perceived favourable teacher behaviours, and perceived unfavourable teacher behaviours. The statistical dataset provides detailed information about the factors and the related items (Turan et al., 2019b).

What kind of actions do students expect from their teachers on SNSs? When the factor of perceived favourable teacher behaviours was examined, it was seen that the students liked some kind of interaction with their teachers. For example, they favoured their teachers' sharing information about their personal life and professional developments. A descriptive study by Göktas (2015) of 416 undergraduate physical education and sport students reported similar results in the item "read my teachers' education information", which had the highest mean score among 23 items, and the third and fourth items having higher mean scores were "read my teachers' status updates" and "watch videos my teachers' post". Aydin's (2014) study with 121 English language teaching undergraduate students revealed almost the same results, with the item "read my teachers' status updates" having the highest mean score, followed by viewing photos and videos of teachers. This reaction seems appropriate to the nature of SNSs. Students can be curious about their teachers; therefore they want to read basic information about them.

What kind of posts do students want their teachers to share and not to share? When the factor perceived unfavourable teacher behaviours was examined, the students mostly disliked their teachers' sharing their political and religious views. Previous research studies also reported that students negatively perceived some kind of teacher self-disclosure (Kearney et al., 1991; McBride & Wahl, 2005). This was also the most important finding in the qualitative phase of the study, as stated previously. In her blog concerning social media, Fuglei (2014) gave the most important tip, "don't say anything on your social media profile that you wouldn't say in class". Nemetz (2012) designed a study in which the students rated the appropriateness of Facebook scenarios depicting fictional faculty behaviours. She reported the following behaviours from the least to the most appropriate: "lip ring comment, drinking, violation comment, professor reports reputation of other professors, party information request, racism assignment, Jesus statement, ..." (Nemetz, 2012: 6).

The perceived utility factor included actions about SNSs' contributions to students' participation in the course, motivation towards course, communication with their teachers, and their expectations about receiving more feedback concerning their courses. Social media is a tool that can enhance communication, and this effect can be seen in educational environments in particular. As a consequence, students expect and tend to use social media to communicate with their teachers (Hamid et al., 2015). This communication with the students generally refers to announcements, such as scheduling and dates of exams, organization purposes (Froment et al., 2017), and content sharing (Draskovic et al., 2013). Such interaction with their teachers is itself a motivation for students



(Draskovic et al., 2013), which positively affects academic motivation (Imlawi et al., 2015) and academic performance (Sarapin & Morris, 2015).

According to students, under the perceived barriers factor, the biggest barrier to interacting with their teachers was that being a friend in SNSs would affect their communication negatively. The intimacy level between teachers and students can be the starting point of the discussion. Song et al. (2016) suggested that student and teacher relationship in online environments was more intimate than face-to-face environments. Therefore, students might think that sharing information might negatively affect their professional communication, and it is possible that this is why the students in the current study indicated that they did not want their teachers to see their posts. The responses to other items, especially those about bias and prejudice support this inference. A similar discussion from teachers' perspective was presented by Akkoyunlu et al. (2015). The teachers in their study stated that they thought they could not be fair to their students when they knew about their students' private lives, and it is noteworthy that this item was the second most loaded item in their study, clearly showing that neither teachers nor students wanted their posts to be seen by the other person. Furthermore, some students indicated that seeing their teachers' posts might negatively affect their attitude to their teachers. This might be the main reason why the students did not want to send a friend request to course teachers.

## 6. Conclusions

New media has evolved into a participatory and interactive culture. Social media inevitably reflects values and ideologies. Contemporary media now address different skills and competencies; i.e., multiple literacies "that are required by the whole range of contemporary forms of communication" (Buckingham, 2008: 88). A person who produces a media message should consider how the target audience will perceive and respond to the message. Teachers should avoid possible negative self-disclosure to their students (Miller et al., 2014). Although further research is required on teachers' perspectives, meanwhile we suggest that the guidelines concerning student-teacher SNS communication from various studies (Kearney et al., 1991; McBride & Wahl, 2005; Miller et al., 2014) are followed in addition to our main finding that students consider teachers should not share political or religious views with them over SNSs. Teachers should, therefore, have two separate accounts, one for personal life and one for professional issues. In addition, teachers could use only Facebook course groups for interaction with students, which would prevent the latter from seeing what teachers are sharing. On the other hand, several studies have shown (Draskovic et al., 2013) that students expect, to some degree, that teachers share developments in their professional life and events in their personal life. This finding was confirmed in our study. Teachers should, thus, take this into account when communicating with students over SNSs.

The literature review and our study reveal that student-teacher communication over SNS is both positive and negatively viewed and experienced by students. There is, thus, a dichotomy: certain actions must be avoided, but others that facilitate interaction with students are to be encouraged. Communication on SNSs can be carried out according to relevant policies or guidelines determined jointly by students and teachers or the respective institution. Students and teachers should be given information about the privacy settings of SNSs so that they can adjust who can see their posts and with whom they share other information.

### 6.1. Recommendations for further research

Since this study focused on the students' perspective, further investigations should be undertaken concerning teachers' views about student-teacher friendship. Teachers might not favour communication via SNSs because it will surely interrupt and distract their daily routines, such as lecturing, researching, and organising official meetings. Therefore, it is important to elucidate teachers' perspective about communication over SNSs. Since the social and cultural environment





affects communication, to determine how different cultures' react to SNSs communication, the same questionnaire can be applied to participants from various cultures.

## 6.2. Limitations

Although this research had over 1,000 participants, the participants were reached through convenience sampling; the data obtained from 1,324 respondents cannot give a representative result for Turkey. In addition, culture is one of the most important determinants of human relations, and the data in this study was affected by the subculture of university students in Turkey. Lastly, although it was not intended, the majority of the students that volunteered were female, and it is possible that female students' online attitude differs from that of male students.

## References

- Akkoyunlu, B., Daghan, G., & Erdem, M. (2015). Teacher's Professional Perception as a Predictor of Teacher – Student Friendship in Facebook: A Scale Development Study. *International Online Journal of Educational Sciences*, 7(1), 242-259. <https://doi.org/10.15345/iojes.2015.01.020>
- Aydin, S. (2012). A review of research on Facebook as an educational environment. *Education Tech Research Dev*, 60(6), 1093-1106. <https://doi.org/10.1007/s11423-012-9260-7>
- Aydin, S. (2014). Foreign language learners' interactions with their teachers on Facebook. *System*, 42, 155-163. <https://doi.org/10.1016/j.system.2013.12.001>
- Barber, L., & Pearce, K. (2008). *The effect of instructor Facebook participation on student perceptions of teacher credibility and teacher attractiveness*. [Paper Presentation]. The International Communication Association Conference. San Diego, CA, United States. <http://bit.ly/2qp6GOY>
- Buckingham, D. (2007). Digital media literacies: Rethinking media education in the age of the Internet. *Research in Comparative and International Education*, 2(1), 43-55. <https://doi.org/10.2304/rcie.2007.2.1.43>
- Buckingham, D. (2008). Defining digital literacy: What do young people need to know about digital media? In C. Lankshear, & M. Knobel (Eds.), *Digital Literacies: Concepts, Policies and practices* (pp. 73-90). Peter Lang. <http://bit.ly/2WPIj9x>
- Butler, K. (2010). Tweeting your own horn. *District Administration*, 46(2), 41-44. <https://bit.ly/2DVQ0m0>
- Callaghan, N., & Bower, N. (2012). Learning through social networking sites – the critical role of the teacher. *Educational Media International*, 49(1), 1-17. <https://doi.org/10.1080/09523987.2012.662621>
- Cayanus, J.L., & Martin, M.M. (2004). An instructor self-disclosure scale. *Communication Research Reports*, 21, 252-263. <https://doi.org/10.1080/08824090409359987>
- Cayanus, J.L., & Martin, M.M. (2008). Teacher self-disclosure. Amount, relevance and negativity. *Communication Quarterly*, 56, 325-341. <https://doi.org/10.1080/01463370802241492>
- Creswell, J.W., & Plano-Clark, V.L. (2011). *Choosing a mixed methods design*. In J.W. Creswell, & V.L. Plano-Clark (Eds.), *Designing and conducting mixed methods research* (2nd ed.). Sage Publications. <https://doi.org/10.3316/qrj0702090>
- Davis, C., Deil-Amen, R., Rios-Aguilar, C., & González-Canche, M.S. (2012). *Social media in higher education: A literature review and research directions*. The Centre for the Study of Higher Education at the University of Arizona and Claremont Graduate University. <http://bit.ly/2CczAEC>
- De-Vellis, R.F. (2003). *Scale development: Theory and applications* (2nd ed.). Sage.
- Draskovic, N., Caic, M., & Kustrak, A. (2013). Croatian perspective(s) on the lecturer-student interaction through social media. *International Journal of Management Cases*, 15(4), 331-339. <https://bit.ly/2E1mZVH>
- Elhay, A.A., & Hershkovitz, A. (2019). Teachers' perceptions of out-of-class communication, teacher-student relationship, and classroom environment. *Education and Information Technologies*, 24, 385-406. <https://doi.org/10.1007/s10639-018-9782-7>
- Hershkovitz, A., & Forkosh-Baruch, A. (2013). Student-teacher relationship in the Facebook era: The student perspective. *Engineering Education and Life-Long Learning*, 23(1), 33-52. <https://doi.org/10.1504/ijceell.2013.051765>
- Finn, A.N., Schrod, P., Witt, P. L., Elledge, N., Jernberg, K.A., & Larson, L.M. (2009). A metaanalytical review of teacher credibility and its associations with teacher behaviors and student outcomes. *Communication Education*, 58, 516-537. <https://doi.org/10.1080/03634520903131154>



- Froment, F., García-González, A.J., & Bohórquez, M.R. (2017). The use of social networks as a communication tool between teachers and students: A literature review. *The Turkish Online Journal of Educational Technology*, 16(4), 126-144. <http://bit.ly/2qr2Zbu>
- Frymier, A., & Thompson, C. (1992). Perceived teacher affinity-seeking in relation to perceived teacher credibility. *Communication Education*, 41 (4), 388-399. <https://doi.org/10.1080/03634529209378900>
- Fuglei, M. (2014). Social media in education: Benefits, drawbacks and things to avoid. <http://bit.ly/2reD7QN>
- Fusani, D.S. (1994). Extra-class communication: Frequency, immediacy, self-disclosure, and satisfaction in student-faculty interaction outside the classroom. *Journal of Applied Communication Research*, 22, 232-255. <https://doi.org/10.1080/00909889409365400>
- Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: A critical analysis of research on microblogging in education published in 2008-2011. *British Journal of Educational Technology*, 43(5), 783-801. <https://doi.org/10.1111/j.1467-8535.2012.01357.x>
- Göktas, Z. (2015). Physical education and sport students' interactions with their teachers on Facebook. *Anthropologist*, 21(1-2), 18-30. <https://doi.org/10.1080/09720073.2015.11891789>
- Greenhow, C., Gleason, B., & Li, J. (2014). Psychological, social, and educational dynamics of adolescents' online social networking. *Media Education*, 5(2), 115-130. <http://bit.ly/32icfMy>
- Hamid, S., Waycott, J., Kurnia, S., & Chang, S. (2015). Understanding students' perceptions of the benefits of online social networking use for teaching and learning. *Internet and Higher Education*, 26, 1-9. <https://doi.org/10.1016/j.iheduc.2015.02.004>
- Harper, B. (2018). Technology and teacher-student interactions: A review of empirical research. *Journal of Research on Technology in Education*, 50(3), 214-225. <https://doi.org/10.1080/15391523.2018.1450690>
- Hershkovitz, A., & Forkosh-Baruch, A. (2013). Student-teacher relationship in the Facebook-era: The student perspective. *International Journal of Continuing Engineering Education and Life-Long Learning*, 23(1), 33-52. <https://doi.org/10.1504/ijceell.2013.051765>
- Hershkovitz, A., & Forkosh-Baruch, A. (2017). Teacher-student relationship and Facebook-mediated communication: Student perceptions. [La relación profesor-alumno y la comunicación en Facebook: Percepciones de los alumnos]. *Comunicar*, 53, 91-100. <https://doi.org/10.3916/C53-2017-09>
- Hutchens, J.S., & Hayes, T. (2014). In your Facebook: Examining Facebook usage as misbehavior on perceived teacher credibility. *Education and Information Technologies*, 19(1), 5-20. <https://doi.org/10.1007/s10639-012-9201-4>
- Imlawi, J., Gregg, D., & Karimi, J. (2015). Student engagement in course-based social networks: The impact of instructor credibility and use of communication. *Computers & Education*, 88, 84-96. <https://doi.org/10.1016/j.compedu.2015.04.015>
- Ito, M., Baumer, S., Bittanti, M., Cody, R., Stephenson, B.H., Horst, H.A., Lange, P.G., Mahendran, D., Martínez, K.Z., Pascoe, C.J., Perkel, D., Robinson, L., Sims, C., & Tripp, L. (2009). *Hanging out, messing around, and geeking out: Kids living and learning with new media*. MIT Press. <https://doi.org/10.7551/mitpress/8402.001.0001>
- Johnson, K. (2015). The effect of Twitter posts on students' perceptions of instructor credibility. *Learning, Media and Technology*, 36(1), 21-38. <https://doi.org/10.1080/17439884.2010.534798>
- Johnson, B., & Christensen, L. (2004). *Educational research: Quantitative, qualitative, and mixed approaches (2nd edition)*. Pearson Education Inc. <https://bit.ly/37zAae5>
- Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31-36. <https://doi.org/10.1007/BF02291575>
- Karpinski, A.C., & Duberstein, A. (2009). *A description of Facebook use and academic performance among undergraduate and graduate students* [Poster presentation]. Meeting of the American Educational Research Association, San Diego, CA, United States.
- Kearney, P., Plax, T.G., Hays, E.R., & Ivey, M.J. (1991). College teacher misbehaviors: What students don't like about what teachers say or do. *Communication Quarterly*, 39, 309-324. <https://doi.org/10.1080/01463379109369808>
- Kirschner, P.A., & Karpinski, A.C. (2010). Facebook and academic performance. *Computers in Human Behavior*, 26(6), 1237-1245. <https://doi.org/10.1016/j.chb.2010.03.024>
- Kolek, E.A., & Saunders, D. (2008). Online disclosure: An empirical examination of undergraduate Facebook profiles. *NASPA Journal*, 45(1), 1-25. <https://doi.org/10.2202/1949-6605.1905>
- Lever, J., Krzywinski, M., & Altman, N.S. (2017). Points of significance: Principal component analysis. *Nature methods*, 14(7), 641-642. <https://doi.org/10.1038/nmeth.4346>
- Manca, S., & Ranieri, M. (2016). 'Yes for sharing, no for teaching!': Social media in academic practices. *Internet and Higher Education*, 29, 63-74. <https://doi.org/10.1016/j.iheduc.2015.12.004>



- Manca, S., & Ranieri, M. (2017). Implications of social network sites for teaching and learning. Where we are and where we want to go. *Education and Information Technologies*, 22(2), 605-622. <https://doi.org/10.1007/s10639-015-9429-x>
- Mazer, J.P., Murphy, R.E., & Simonds, C.J. (2007). I'll see you on 'Facebook': The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56, 1-17. <https://doi.org/10.1080/03634520601009710>
- Mazer, J.P., Murphy, R.E., & Simonds, C.J. (2009). The effects of teacher self-disclosure via Facebook on teacher credibility. *Learning, Media and Technology*, 34(2), 175-183. <https://doi.org/10.1080/17439880902923655>
- McBride, M.C., & Wahl, S.T. (2005). 'To say or not to say': Teachers' management of privacy boundaries in the classroom. *Texas Speech Communication Journal*, 30(1), 8-22. <https://bit.ly/2E7j7CZ>
- McCroskey, J.C., Valencie, K.M., & Richmond, V.P. (2004). Toward a general model of instructional communication. *Communication Quarterly*, 52, 197-210. <https://doi.org/10.1080/01463370409370192>
- Miller, A.N., Katt, J.A., Brown, T., & Sivo, S.A. (2014). The relationship of instructor self-disclosure, nonverbal immediacy, and credibility to student incivility in the college classroom. *Communication Education*, 63(1), 1-16. <https://doi.org/10.1080/03634523.2013.835054>
- Miron, E., & Ravid, G. (2015). Facebook groups as an academic teaching aid: Case study and recommendations for educators. *Educational Technology & Society*, 18(4), 371-384. <http://bit.ly/2NNbV3k>
- Nemetz, P. (2012). Faculty social networking interactions: Using social domain theory to assess student views. *Journal of Instructional Pedagogies*, 8, 1-13. <https://bit.ly/2JQnKnT>
- Norusis, M.J. (1998). *SPSS professional statistics*. Prentice-Hall.
- Oye, N.D., Helou, A.H., & Rahim, N.Z. (2012). Model of perceived influence of academic performance using social networking. *International Journal of Computers and Technology*, 2(2), 24-29. <https://doi.org/10.24297/ijct.v2i1.2612>
- Plew, M.S. (2011). Facebook Friendships between college/university instructors and students: Deciding whether or not to allow students as friends, communicating with students, and the individual differences that influences instructors' impression management on Facebook [Unpublished doctoral dissertation]. Georgia State University.
- Puzio, E.R. (2013). Why can't be friends? How far can the state go in restricting social networking communications between secondary school teachers and their students? *Cardozo Law Review*, 34(3), 1099-1127.
- Sarapin, S.H., & Morris, P.L. (2015). Faculty and Facebook friending: Instructor-student online social communication from the professor's perspective. *Internet and Higher Education*, 27, 14-23. <https://doi.org/10.1016/j.iheduc.2015.04.001>
- Song, H., Kim, J., & Luo, W. (2016). Teacher-student relationship in online classes: A role of teacher self-disclosure. *Computers in Human Behavior*, 54, 436-443. <https://doi.org/10.1016/j.chb.2015.07.037>
- Song, H., Kim, J., & Park, N. (2019). I know my professor: Teacher self-disclosure in online education and a mediating role of social presence. *International Journal of Human-Computer Interaction*, 35(6), 448-455. <https://doi.org/10.1080/10447318.2018.1455126>
- Sorensen, G. (1989). The relationship among teachers' self-disclosive statements, students' perceptions, and affective learning. *Communication Education*, 38, 259-276. <https://doi.org/10.1080/03634528909378762>
- Strauss, A.L., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Sage. <https://doi.org/10.4135/9781452230153>
- Tess, P.A. (2013). The role of social media in higher education classes (real and virtual). A literature review. *Computers in Human Behavior*, 29(5), 60-68. <https://doi.org/10.1016/j.chb.2012.12.032>
- Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications*. American Psychological Association. <https://doi.org/10.1037/10694-000>
- Trad, L., Baker, N., Blackman, H., Glynn, K., Miller, A.N., Trad, L., & Wright, A. (2012). Incivility and instructor communication in the college classroom. *Florida Communication Journal*, 40, 47-53. <http://bit.ly/2X4QiQc>
- Veletsianos, G., Kimmons, R., & French, K.D. (2013). Instructor experiences with a social networking site in a higher education setting: expectations, frustrations, appropriation, and compartmentalization. *Educational Technology Research and Development*, 61, 255-278. <https://doi.org/10.1007/s11423-012-9284-z>
- Yıldırım, A., & Şimşek, H. (2005). *Sosyal bilimlerde nitel araştırma yöntemleri*. Seçkin.