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KNOWING ME, KNOWING YOU: TEACHERS' PERCEPTIONS OF COMMUNICATION WITH THEIR STUDENTS ON FACEBOOK

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ABSTRACT

Aim/Purpose	The purpose of the current study is to explore positive and negative aspects of teacher-teacher communication via Facebook, as perceived by teachers in secondary education.
Background	Teacher-student relationship is key to teachers' wellness and professional development and may contribute to positive classroom environment. In recent years, as social networking sites (e.g., Facebook) became popular, these connections have extended to such platforms. However, most studies of the use of social networking sites in the school context are pedagogically-driven, and research on the ways teacher-student relationship is facilitated by these platforms is meager.
Methodology	We utilized a qualitative approach, analyzing responses to open-ended questions about this topic by middle- and high-school teachers' all across Israel (N=180). We used both top-down and bottom-up analyses.
Contribution	This study contributes to the growing literature about the overall impact of using social networking sites on the educational milieu. Specifically, it contributes by shedding light on teachers' perspectives of that phenomenon. Insights from this study are important for educators and education policy makers.
Findings	Overall, teachers who were connected to their students de facto, as well as teachers who expressed a wish to be connected to their students, acknowledged the advantages of befriending their students on Facebook, in terms of both teacher- and student benefits. Teachers' overall viewpoint on the negative aspects of Facebook-connections with students is multifaceted. As such, our findings highlight the complexity of using social networking sites by teachers.

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Recommendations for Practitioners	We recommend that educators who wish to extend the relationship with their student to online platforms do so wisely, taking advantage of the benefits of using these platforms, and being aware of (and cautious about) potential drawbacks. We encourage educators to learn more about the potential uses of social networking sites and instant messaging services, and then to examine whether these uses may fit their educational agenda. We recommend that education policymakers make evidence-based decisions regarding the use of social networking sites by teachers and encourage school communities to discuss these issues together.
Recommendations for Researchers	As technology develops rapidly, we recommend that researchers examine the topics raised in the current research with regards to other platforms, in order to better understand the technological aspects that may affect students' perceptions of the use of social networking sites and instant messaging services to communicate with their students. The issues studied here should also be studied in different cultural contexts. We recommend broadening the research and making results available to policymakers when making decisions regarding social media in educational contexts.
Impact on Society	Understanding teachers' perspectives of their relationship with their students in today's digital, networked world gives us a better understanding of the changing role of teachers; hence, it may assist in planning teacher training and professional development, with the ultimate goal of realizing a better educational system.
Future Research	Future studies should focus on other social networking sites and instant messaging services, as well as on other countries and cultures.
Keywords	teacher-student relationship, teacher-student communication, social networking sites, SNS-mediated communication, Facebook

INTRODUCTION

Teacher-student relationships are key in students' academic, social, and emotional development, and are vital for teachers' professional growth. Communication is the main mechanism through which teachers and students exchange information, and through which teachers supply students with academic and personal support; hence, communication is an integral, necessary part of teacher-student relationship. Naturally, teacher-student communication goes beyond school time. As social networking sites (SNS)—like Facebook, Twitter, Instagram, etc.—have been widely adopted among Internet users of all ages, they serve as a natural arena for social interactions for both students and teachers. As a result, teacher-student relationship is often facilitated by SNS-based communication.

Although this study is focused on teachers' perspective, it is important to emphasize that positive student-teacher communication and relationship are key to students' learning, as well as to their social and emotional development. A recent meta-analysis of teacher-student out-of-class communication, examining studies that span over a few decades and cover altogether thousands of students, had revealed positive effects of such communication on both affective and (perceived) cognitive learning (Goldman, Goodboy, & Bolkan, 2016). Similar findings have been recently found regarding teacher-student communication that is facilitated via instant messaging apps (Hershkovitz, Abu Elhija, & Zedan, 2019; Nkhoma, Thomas, Nkhoma, Sriratanaviriyakul, Truong, & Vo, 2018). Indeed, one of the most prominent characteristics of instant messaging—that is, immediacy—has been repeatedly indicated as an important factor of positive teacher-student communication via digital platforms (e.g., Hershkovitz & Forkosh-Baruch, 2019; Rosenberg & Asterhan, 2018). Immediacy—in the context of classroom teacher-student interactions—as was shown via meta-analyses of that construct, is an im-

portant factor affecting learning by increasing students' motivation to learn and their attitudes towards learning (Allen, Witt, & Wheelless, 2006; Witt, Wheelless, & Allen, 2004).

This reality of teachers and students communicating via SNS raises some intriguing questions, since these platforms enable (and possibly promote) new kinds of communication. Interaction via SNS may trigger behavior, as well as cognitive and emotional processes (Fischer & Rauber, 2011; Slater, 2007), and therefore might impact teacher-student relationship at large and, consequentially, teachers' perceptions of their professional identity. Even the very term used in many SNSs to describe connected users—namely, “friends”—may challenge the traditional student-teacher hierarchy, where teachers are allowed some power over their students even when developing close relationship between the two. In that sense, teacher-student friendship on SNS has much to do with teacher-student communication and appropriate behavior, with technological challenges, and with teachers' professional development (Manca & Ranieri, 2017).

Confronting this new reality, school authorities and policymakers have been pondering about their position regarding teacher-student SNS-based communication, often prohibiting such communication altogether. However, most policies are not based on empirical evidence, but rather on notions and public opinion (which naturally tends to be biased towards negative rather than positive aspects of SNS (cf. Arbuthnott & Scerbe, 2016; Maheswaran & Meyers-Levy, 1990; Zillman, Chen, Knobloch, & Callison, 2004). As they are set up without being based on empirical evidence, policies may be changed in the same manner; in Israel, where the study reported in this article was conducted, the Ministry of Education first adopted a banning policy; however, about a year and a half later, the regulations were refined, allowing restricted SNS-related communication (Israeli Ministry of Education, 2011; 2013).

Therefore, the main objective of this study is to gain deep understanding of teachers' perceptions of benefits and drawbacks of using SNS as a communication tool with their students. Our focus is on secondary school teachers, a population which is still under-researched in that context (Akçayır & Akçayır, 2016).

RELATED WORK

TEACHERS' PROFESSIONAL IDENTITY IN THE INFORMATION ERA

The teacher's role is continually changing, from being the major knowledge source to being a role model and mentor who constantly reflects upon his or her purpose, personal identity, relevance of the professional work to the real world, and relationships with students and colleagues (Fullan & Hargreaves, 2014). This is especially challenging in an era of transition, in which teachers need to be prepared to feel confident in settings saturated in information and communication technologies (ICT) (Banas & York, 2014; Istenic Starčič, Cotic, Solomonides, & Volk, 2016). This requires change in educational perceptions as well as in the professional identity of educators (Hargreaves, 2003).

In recent years, research regarding professional identity in teaching has broadened and deepened and has been in the center of the research discourse in education (Rodgers & Scott, 2008; Thomas & Beauchamp, 2011). The literature differentiates between the “personal self”, which refers to the sum of personal information on the individual, and the “professional self”, which refers to the sum of information on the individual focusing on his or her professional functioning. The professional identity is shaped within interaction of the person with him or herself, as well as with the social, cultural and professional environment (Akkerman & Meijer, 2011). However, the digital era coerces the teacher to enmesh between the two identities, as in many virtual spaces—like in the case of social networking sites—teachers act as both their “personal self” and “professional self”. As demonstrated in previous studies, positive beliefs and attitudes related to the value of technology in their role as teachers, together with computer self-efficacy, promote teachers' utilization of technology as part of their definition of the teaching profession (Prestridge, 2012; Sadaf, Newby, & Ertmer, 2016).

Additionally, policy changes and organizational reforms may create contradictions between the personal perceptions and others' perceptions regarding the scope of the term "professionalism" in teaching; consequently, this may create incongruity within teachers' professional identity (Beijaard, Meijer, & Verloop, 2004; Coldron & Smith, 1999). An example of such changes, which is relevant to our study, is the extension of teacher-student communication to online environments, beyond school grounds (Thorne, Sauro, & Smith, 2015). These changes raise the need to include ethical, social, and emotional aspects in teachers' identity definition, especially within the context of the digital era (den Brok, van der Want, Beijaard, & Wubbels, 2013). Indeed, it was mentioned recently that the professional learning needs of teachers might include ICT proficiency, which is considered an effective means to support and even promote their professional identity; this is frequently not addressed (Czerniawski, Guberman, & MacPhail, 2017).

TEACHER-STUDENT RELATIONSHIP AND COMMUNICATION

Student-teacher relationship is key to students' academic, social, and emotional development and may affect classroom and school environment at large (Birch & Ladd, 1998; Cornelius-White, 2007; Gregory & Weinstein, 2004; Hamre & Pianta, 2001; Sabol & Pianta, 2012). Strong, supporting student-teacher relationship might promote students' feelings of safety, security, and belongingness and may eventually lead to higher academic achievements (Hershkovitz & Forkosh-Baruch, 2019). In contrast, conflictual situations in such relationship might place students in situations where they do not feel connected to school's academic and emotional resources and may lead them to failure (Roorda, Koomen, Spilt, & Oort, 2011). Importantly, positive or negative teacher-student relationship might also influence teachers' well-being and professional development (de Jong, 2013; Gu & Day, 2007; Hamre, Pianta, Downer, & Mashburn, 2008; O'Connor, 2008; Roorda et al., 2011; Spilt, Koomen, & Thijs, 2011; Veldman, van Tartwijk, Brekelmans, & Wubbels, 2013; Yoon, 2002). Indeed, the importance of positive teacher-student connections and relationship is undisputed, being interdependent (Frymier & Houser, 2000).

Communication between teachers and students is an integral part of their relationship. Digital media open new opportunities for such communication, thereby allowing greater scope in terms of width, depth, and range of topics within online communication. In recent years, the popularity of instant messaging services (e.g., WhatsApp, Snapchat, Facebook Messenger) and social networking sites (e.g., Facebook, Twitter, Instagram) for interpersonal communication has grown dramatically. This phenomenon is prominent among teens. A 2015 survey has found that over a half of U.S. teens text their friends on a daily basis and that 89% of the teens use at least one social networking site (Lennhart, Smith, Anderson, Duggan, & Perrin, 2015). Due to their popularity among children and teens, teachers and instructors often use these platforms as a way to "meet" with their students where they are (Akçayır, 2017).

Conceptualizing teacher-student relationships, Hamre and Pianta (2006) noted that in addition to individual features, three components shape the relationships between teachers and students: perceptions and beliefs, information exchange processes, and external influence. These components are highly relevant to the current era, where teacher-student communication is extended to social networking sites (SNS). The use of these platforms is accompanied by potentially impactful perceptions and beliefs (e.g., Köseoğlu, 2017), is changing the way of communication *de facto* (e.g., Stieglitz & Dang-Xuan, 2013), and, following that, is serving as an important external factor (e.g., Mazer, Murphy, & Simonds, 2007).

The use of SNS for teacher-student communication symbolizes the blurring of traditional school borders and may affect those very borders. That is, the frequent, free communication that characterizes SNS might bring about a paradigmatic change in teacher-student connections, which in turn may have impact on schooling altogether (Wentzel, 2010). It has been argued that students who have good interactions with their teachers have close, warm relationship with them and are often motivated and more interested in learning (Fredriksen & Rhodes, 2004; Mazer, 2012; Wong, 2014).

In these platforms, communication is naturally highly social and is often characterized by self-disclosure. In such cases, this communication between teachers and students is naturally interpersonal; hence, both the teacher and the student communicate with each other as individuals, but still take into account their school roles (i.e., teacher role or student role) and their group affiliation. This complicates the more frequent teacher-student communication, which is based on their traditional roles (Dobrinsky & Frymier, 2004). Furthermore, this new type of communication may affect the traditional learning spaces (Mazer, Murphy, & Simonds, 2009).

Although researched extensively in higher-education contexts, research on the use of instant messaging and social networking sites for teacher-student communication in primary and secondary schools is meager. A recent literature review of the use of instant messaging in education has found only three studies conducted in secondary school level and no studies whatsoever in primary schools (Tang & Hew, 2017); moreover, two of these three studies are explicitly limited to pedagogical aspects. Similarly, the use of social networking sites for teacher-student communication has been mostly studied in formal, pedagogical contexts. When examining communication via these platforms, various advantages are being recognized, encompassing both functional and social aspects; these serve a wide range of purposes, such as information exchange, facilitating a positive social atmosphere, creating a dialogue among students, and supporting learning (Asterhan & Rosenberg, 2015; Bouhnik & Deshen, 2014; Schouwstra, 2016) – all of which are directly connected to teacher-student relationship.

THEORETICAL FRAMEWORK

Our study of student-teacher relationships is based on the axes defined in Ang's (2005) Teacher-Student Relationship Inventory (TSRI), namely, Satisfaction, Instrumental Help, and Conflict. We found this framework suitable for two main reasons. First, this inventory was validated by populations of middle school teachers, while previous scales, mainly Pianta's (1992) STRS, were mostly focused on much younger ages. Secondly, Ang's axes well connect with the special characteristics of SNS.

The first axis of this framework is Satisfaction, which refers to experiences reflecting positive experiences between students and teachers; these are linked to positive adjustment to school (Wentzel & Asher, 1995). Studies, not necessarily technology-related, show that teachers prefer students who demonstrated positive—as opposed to negative—attitudes (e.g., Brophy & Evertson, 1981). Furthermore, supportive and positive teacher–student relationships predict positive educational outcomes among lower secondary and high school students (Davis, 2003).

The second axis is Instrumental Help, that is, when students refer to teachers as resource persons, such that they might approach for advice, sympathy, or help. Studies of teacher–student relationships among secondary-school students state that one of the major dimensions connected to student outcomes is instrumental help. Teachers that are concerned about their students' well-being and academic performance, exhibiting interest in them, seek out to assist them in any way they can (Brophy & Evertson, 1978; Coladarci, 1992; Wentzel, 2003). Teachers that show they care for their students are also those who provide assistance, advice, and encouragement, beyond the formal demands of their profession. Their students develop a positive connection to their teachers as well as higher engagement in class; hence, they strive for goals and outcomes in accordance to their teachers' academic values (Ang, 2005).

The third axis is Conflict, referring to negative and unpleasant experiences between students and teachers. Conflict is positively related to behavioral problems (Pianta, Steinberg, & Rollins, 1995) and negatively related to engagement in class (Ladd & Burgess, 2001), i.e., the higher the levels of conflict students feel towards their teachers, the more likely these students will demonstrate more behavioral problems and less engagement in class.

This framework will serve us in understanding teachers' perceptions of teacher-student relationship and communication via Facebook, which is the focus of the current study.

RESEARCH QUESTIONS

Following the literature review—understanding the key role teacher-student relationship and communication takes in teachers' professional development—and considering the importance of SNS-mediated communication in today's digital era, we formulated the following research questions:

1. What are the positive aspects of teacher-student communication via Facebook?
 - a. From the perspective of those teachers who are “friends” with their students?
 - b. From the perspective of those teachers who are interested in a “friendship” with their students?
2. What are the negative aspects of teacher-student communication via Facebook?

METHODOLOGY

DATA COLLECTION AND INSTRUMENTS

The data analyzed in this paper were collected as part of a broader research of student-teacher relationship and Facebook-mediated communication (Forkosh-Baruch, Hershkovitz, & Ang, 2015; Hershkovitz & Forkosh-Baruch, 2017). Facebook is still the most popular SNS, with almost 1.4 billion monthly active users (Facebook, 2017). Despite claims about Facebook being massively abandoned by teens (Madden et al., 2013; Meertens, 2014; Miller, 2013), it was still the most popular SNS among the young population at the time of data collection, and even much afterwards (Lenhart et al., 2015).

Data was collected anonymously using an online questionnaire that was distributed via schools' communication platforms (with the assistance of educators and schools), social networking sites (mostly Facebook and Twitter), and various relevant professional and personal mailing lists, as part of a broader research. The full questionnaire was comprised of background information (e.g., age, gender, teaching seniority), perceptions of teachers' use of Facebook, self-report of personal use of Facebook (generally and in the context of teaching), and the adapted version of Ang's TSRI (see Theoretical Framework section above). Our target population was teachers in lower and higher secondary schools from all over Israel. Informed consents were attained through the online questionnaire.

As part of the full questionnaire, teachers were asked about their current use of, and their connections with their students via Facebook. According to their response, they were grouped into four categories:

1. Connected teachers, who have an active Facebook account and are connected to current students of theirs;
2. Wannabe Connected teachers, who have an active Facebook account, are not connected to current students, but are interested in such a connection;
3. Not Wannabe Connected, who have an active Facebook account, are not connected to any current student, and are not interested in such a connection;
4. Not on Facebook teachers, who do not have an active Facebook account.

In this article, we focus on three open-ended questions that were part of the online questionnaire. First, “How [does/will] the connection [with your current students] on Facebook contribute to you?”. Second, “How [does/will] the connection [with your current students] on Facebook contribute to them?”. These questions were presented only to the Connected and the Wannabe Connected participants. Last, “What, in your opinion, are the negative aspects of teacher-student relationship via Facebook?”; this question was presented to all participants.

As mentioned above, the timing of the questionnaire distribution is important to understand, as a few months prior to this period, the Israeli Ministry of Education had modified its policy regarding SNS, allowing limited Facebook-based connections between teachers and students via groups and only for learning purposes; before that, any teacher-student SNS-based communication was prohibited.

PARTICIPANTS

Altogether, 180 teachers from Israeli public secondary schools countrywide participated in this study, aged 21 to 68 ($M=46.6$, $SD=10.8$), 138 female (77%) and 42 male (23%). The proportion between male and female teachers agrees with a national survey administered in 2012 (Central Bureau of Statistics, 2013), in which 81% of middle-school teachers and 73% of high-school teachers were female. The average age in our population also agrees with the survey: 44.8y/o in middle school and 45.7y/o in high-school. Years of experience ranged from 1 to 38 ($M=18.9$, $SD=10.7$), also identical to the average years of experience reported in the abovementioned survey.

ANALYSIS

The analysis of responses to both questions largely leaned on Ang's (2005) framework of student-teacher relationship, which include three axes: satisfaction, instrumental-help, and conflict. In the case of the first question—focusing on contributions of teacher-student Facebook-mediated communication—the two first axes were clearly identified with minor diversity within each axis. As for the second question, which discusses negative aspects of such communication, all responses are relevant to the conflict axis in Ang's framework. Therefore, we coded these responses into sub-categories, based on a framework defined in a previous study of students' responses to the same question (Hershkovitz & Forkosh-Baruch, 2019). In that study, a bottom-up approach was taken to code the responses, and seven categories were found: exposure to information and privacy, paradigm shift of student-teacher relationship, improper behavior and identity issues, boundaries, inequity issues, technological and socio-technological aspects, and no negative aspects; each of these categories included a few dimensions. The same framework served for this study with only minor alterations deriving from the data itself. As in the previous study, the resulting categories are a product of a spiral process of analyzing the data; both the definition of the categories and the coding of the responses to the categories were done by both authors until full agreement was achieved. Hence, with regards to both questions the directed content analysis method (Hsieh & Shannon, 2005) was utilized.

FINDINGS

We will now present the analyses of the responses to the two questions, first regarding positive aspects of teacher-student Facebook-mediated communication, then regarding perceptions of negative aspects of such communication.

POSITIVE ASPECTS OF TEACHER-STUDENT COMMUNICATION

As stated in the Data Collection and Instruments section, the question regarding actual or potential contributions of Facebook-mediated communication between teachers and students was answered by only two sub-groups of the participants – the Connected and the Wannabe Connected teachers. All 35 teachers in the Connected group responded to this question, and 31 responses were coded. Of the 74 teachers in the Wannabe Connected group, 70 responded (95%), of which 69 were coded. Responses that were irrelevant were not coded, mostly because they did not convey any relevant information about the participants' perceptions of the issue discussed. For example, a response such as "Really contributing" (T47) was not coded, as it does not tell anything specific about the positive aspects of teacher-student communication via Facebook.

Contribution to the Teachers

Connected Teachers. Of the 31 coded responses, 19 (61%) were coded as Satisfaction-related, and 21 (68%) were coded as Instrumental Help-related. Note that a single response may have been coded in both categories.

Satisfaction-related statements referred to two main themes. First, the strengthening of teacher-student relationship via the SNS-mediated communication. This is evident in references to notions such as closeness, openness, and trust. Participants explicitly mentioned that communicating with their students via Facebook “strengthens the teacher-student connection and adds appreciation and respect” (T109), and “contributes very much to the warm relationship created with my homeroom students” (T159).

Second, participating teachers referred to the fact that the strict boundaries that were formally set between them and their students are breaking. This happens due to mutual exposure to each other’s shared content. As two teachers put it, “When I confirmed students [as friends] on Facebook, I showed them that [...] our fields of interest coincide” (T18), “I feel like I’m living in their world and not disconnected” (T38)”. This might facilitate “Openness to personal aspects of the learners” (T171), and by “Observing them in their free time,” teachers often feel that they “know about [the students] more things than their parents do” (T84). Interestingly, teachers mentioned that this merging of the traditionally separated worlds becomes evident also in the physical world: “You can’t describe it. I think it’s hard to explain how a student who uploads a clip of a song he likes feels and a teacher just casually ‘likes’ it [...]. It’s a trigger for a conversation the next day [...].” (T154).

Statements related to Instrumental Help referred to efficiency, convenience, and immediacy. For example, “Efficient communication for sending messages, questions and answers” (T48); “Efficiency. To note everyone and fast. The messages pop up in their mobiles.” (T47); “Direct, accessible, online connection” (T177); “Quick interface for linking to various media – movies, texts...” (T103). Furthermore, teachers emphasized the convenience of using Facebook, rather than formal school online administrative systems, stating that “It’s better to notify this way instead of using the school online system or the school website where they don’t enter everyday” (T47). Finally, teachers referred to the virtual space as an additional learning space for students, where “even if they missed class, they’re connected, they receive summaries and messages” (T14).

Wannabe Connected Teachers. Of the 69 coded responses, 10 (14%) were coded as Satisfaction-related, and 65 (94%) were coded as Instrumental Help-related. Note that a single response may have been coded in both categories.

In addition to statements which are similar to those of the Connected teachers, the Wannabe Connected teachers also mentioned potential contributions of connecting with their students on Facebook to their own improvement of teaching and professional development, for example, “[This] will improve the quality of teaching” (T97), “Extension of my professional tools in updated settings” (T164), “Identifying fields of interest and implementing them in teaching” (T83). Moreover, teachers referred to Facebook as a time- and space-independent learning environment that “could contribute very much to the professional development, to originality of teaching, and to the connection with [...] the subject matters” (T44). Also, the fact that learning materials are accessible to students on Facebook allows “toning down of disciplinary issues (no more, ‘I didn’t hear, I wasn’t there’)” (T133).

Distribution of Satisfaction- and Instrumental Help-related categories in both groups of teachers is summarized in Table 1. We checked for differences between the two groups. Since a single statement could have been coded to multiple categories, we utilized a multiple response set procedure. Pearson Chi-Square test resulted in a significant difference, $\chi^2(2)=35.19$, at $p<0.001$.

Table 1. Contribution to teachers: Distribution of satisfaction- and instrumental help-related categories in the Connected and Wannabe Connected groups

	Satisfaction	Instrumental Help
Connected	19 (61%)	21 (68%)
Wannabe Connected	10 (14%)	65 (94%)

Contribution to the Students

Connected Teachers. Of the 35 responses to this item among the Connected teachers, 27 were coded, the remaining 8 were irrelevant responses. Of these responses, 17 (63%) were coded as Satisfaction-related, and 18 (67%) were coded as Instrumental Help-related. Note that a single response may have been coded in both categories.

Satisfaction-related responses portray the notion of SNS-based communication as facilitating closeness, as a result of a better acquaintance. As one of the teachers stated, such communication is beneficial as it enables “A feeling of belonging. [The students] know about me and I [know] about them. We have nothing to hide. [...] This is real education” (T84). As a result, relationship becomes more intimate and secured: “[They] feel closer to me, are not ashamed to tell stuff, to consult” (T50); “[It] creates a sense of safe connection” (T94); “An excellent, respectful and supporting connection” (T48). Eventually, this paradigm shift leads to higher levels of teachers’ involvement in students’ lives, which the teachers perceive as an advantage: “I’m [...] part of their lives, a more personal connection, involvement in their lives” (T177); “[It] enables them to [...] see me as a person and not as a teacher. [It] leads to much more openness” (T4).

Regarding Instrumental Help-related responses, teachers first referred to the accessibility of students to learning materials and school-related announcements: “They know that anything they want to be updated about and to update – it’s done absolutely and quickly” (T105); “You can share materials like presentations, clips, worksheets, etc. [...] Since the students spend a lot of time [on Facebook], the chance they’ll use these materials is higher” (T176). Furthermore, participants referred to their own availability to their students: “[It] helps in homework, [my] response to difficulties and questions” (T94); “Availability of myself to them, they miss less important messages” (T107). This might lead to broadening of assistance beyond the specific teacher’s expertise: “I help them also in other subject matters in which they experience difficulties” (T102).

Wannabe Connected Teachers. Of the 74 responses to this item among the Wannabe Connected teachers, 69 were coded, the remaining 5 were irrelevant responses. Of these responses, 14 (20%) were coded as Satisfaction-related, and 66 (96%) were coded as Instrumental Help-related.

In addition to statements that are similar to those of the Connected teachers, the Wannabe Connected teachers seemed enthusiastic about the possibility of connecting with their students for enhancing learning and even changing teachers’ roles. This is evident in ideal, even utopic, statements that refer both to Instrumental Help and Satisfaction. Examples for Instrumental Help-related responses that demonstrate this anticipation are the following: “The accompanying adult is no longer the main focus, the teacher’s role is in guidance” (T82); “Students’ Facebook is shallow and superficial, they are involved in it most of the day. When a teacher will insert educational and moral contents it might change their involvement in rubbish. It may encourage curiosity of the learning to read relevant material on the Internet about the same subject the teacher is talking about” (T52); “[This connection] can contribute to their learning experience and open their horizons as well as the teacher’s horizons” (T44).

Distribution of Satisfaction- and Instrumental Help-related categories in both groups of teachers is summarized in Table 2. Difference between the two groups is statistically significant, with $\chi^2(2)=27.88$, at $p<0.001$.

Table 2. Contribution to students: Distribution of satisfaction- and instrumental help-related categories in the Connected and Wannabe Connected groups

	Satisfaction	Instrumental Help
Connected	17 (63%)	18 (67%)
Wannabe Connected	14 (20%)	61 (88%)

Finally, we examined within-subject differences in reference to the two categories of contribution of SNS-mediated communication (Satisfaction, Instrumental Help) to teachers and students. In the Connected group, no significant differences were found in either category, with $Z=-0.71$, at $p=0.48$, for Satisfaction, and $Z=-1.41$, at $p=0.16$, for Instrumental Help ($N=31$). Also, in the Wannabe Connected group, no significant differences were found, with $Z=-1.00$, at $p=0.32$, for Satisfaction, and $Z=-1.16$, at $p=0.25$, for Instrumental Help.

NEGATIVE ASPECTS OF TEACHER-STUDENT COMMUNICATION

The question regarding negative aspects of Facebook-mediated communication between teachers and students was presented to all participants. All 180 participating teachers responded to this question, of which 170 responses were coded (94%). As mentioned above, irrelevant responses were not coded, because they did not convey any relevant information about the participants' perceptions of the issue discussed. For example, a response such as "Students should not be friends with their teacher on Facebook and vice versa" (T116) was not coded, as it does not tell anything specific about the negative aspects of teacher-student communication via Facebook.

Exposure to Information and Privacy

This category includes statements referring to potential consequences of excessive exposure to information by either teachers or students, thereby leading to a negative outcome in terms of invasion of privacy. Overall, 86 responses were coded in this category. Statements under this category may be examined along different dimensions.

Unidirectional vs. bidirectional view of privacy invasion. Many teachers saw the risk of invasion of privacy as two-sided: "Mutual exposure to parts of the lives of teachers and students" (T53); "The students and the teachers are exposed to the private life aspects of the other" (T54); "The possibility of exposure to personal-public out-of-class life of students to teachers and teachers to students" (T103). Some teachers referred to students and teachers separately regarding different privacy-related issues, for example, "As a teacher, you can't [...] post photos or support a certain political party [on Facebook]. As for the students, they can't post photos exposing negative behaviors, such as drinking alcohol [...] or hurting other students" (T18).

However, some teachers mentioned only one side's privacy as being invaded; in most cases, they referred to the teachers. For example, "Loss of modesty and privacy, for example, the teacher can upload a photo of hers in a bikini or kissing with a boyfriend/husband" (T95); "There absolutely shouldn't be on the teacher's profile things that relate to his life, his actions, humor that kids don't understand. There's no reason in the world for students to see what I do [...] when I don't teach them" (T52); "[It] causes excessive nosiness of students in the teacher's life" (T134). Interestingly, some teachers explicitly mentioned that privacy should be kept only on their side, as they might benefit from being exposed to students' personal life, "The teacher's personal life is his alone and do not need to be open to the students. On the other hand... If the teacher can once in a while browse students' profiles, he can know about problems arising, such as banning, etc." (T86).

Scope of exposure. Teachers referred to the extended scope of shared information posted on Facebook in concern of invasion of privacy. For example, "I don't need my students to know beyond

what I want them to know” (T32); “If I, as a teacher, sees personal provocative posts such that require attention or monitoring – should I invade the private space of my students and react?” (T1).

Paradigm Shift of Student-Teacher Relationship

This category refers to the undermining of traditional teacher-student relationship as part of an educational paradigm shift in which relationships tend to undergo radical changes. Teacher-student hierarchy is challenged in general, more so when both parties are engaged in professional and social interactions via social networking sites. Overall, 46 responses were coded in this category. The paradigm shift referred to under this category might be evident in different aspects of teacher-student relationship.

Respect. Teachers mentioned the issue of authority and respect as an inherent component of their professional identity; these may be compromised as a result of connections via Facebook. For example, “As teachers, we should be more representative towards our students, we represent values, we represent a sector. Just as a lawyer doesn’t connect with his clients on Facebook and shares his personal life with them. [...] Facebook ruins the purity of the connection between the teacher and the student” (T95); “Teachers/students might compromise the [...] limitations of authority, and then there’s a problem here” (T159). Some responses clearly stated that the ramification of lack of respect “eventually creates a kind of disrespect” (T108). Moreover, some teachers addressed the possible diffusion of respect and authority issues to the classroom, for example, “The distance between the teacher and the student may completely disappear, which can influence the student’s manner in the classroom and even cause disciplinary problems” (T70); “This basic distinction [between a friend and a teacher] will make [the teacher’s] work difficult later on” (T1).

Friendship. Basically, teachers referred to the need for separation between being a teacher and being a friend with their students. For example, “Sometimes it creates a tight and personal connection between them, and this shouldn’t happen” (T99); “Sometimes you come across students who find it difficult to identify student-teacher relationship as oppose to friend-friend relationship” (T109); “Facebook is [...] a social network – having my students in this network may create a friendship-like connection with my students, and I don’t have any interest in that!! I wish to be a teacher, not a friend!” (T149). Some teachers emphasized the students’ need to distinguish between a friend and a teacher, as “friends they have more than enough, and they need from us to be their teachers and educators” (T1).

Communication and language. Some teachers mentioned potential implications of the very nature of Facebook-mediated communication, which is characterized by being “Loss of the teacher’s authority by the communication being intensive and friendlier and there’s less fear of saying things from ‘behind the keyboard’” (T34). The language and expression that are routinely used on social networking sites might cause to be “carried away to improper discourse between a teacher and her students, the teacher may forget her status and the limitations on her means of expression” (T66). Moreover, “there’s a chance that teachers who use Facebook will express themselves as friends and not as a leader of the learning group” (T121).

Improper Behavior and Identity Issues

This category refers to behavior that was considered by the teachers to be unfit in the context of communication between teachers and students. This includes cases in which identity might be manipulated. Altogether, 22 responses were coded under this category, in which several aspects can be identified.

Inappropriate behavior. Many teachers mentioned different degrees of inappropriate behavior, from using bad language—“Once in a while students express themselves baldly towards teachers” (T49)—to intentional offense—“Unfortunately, one could insult, gossip and reveal personal information – and everybody will see it” (T6)—and intentional misuse of information, such as “Malicious

use by a student of things written by the teacher” (T176) or “Illegal transfer of information” (T160). At the end of this continuum, a few teachers even mentioned “Harassments and threats” (T106).

Identity issues. A few teachers also raised identity-related concerns. For example, “You’re not sure who you’re connected to in real-time, you can only check later on” (T153); “Some people use fake names or steal others’ Facebook [account]” (T117).

Boundaries

This category refers to students’ concerns regarding the blurring of boundaries when student-teacher communication is mediated via SNS. Mostly, students set clear boundaries between school time and after-school time. Altogether, 69 responses were coded under this category. In general, teachers’ statements referred to boundaries of the teacher’s role. Mostly, teachers were concerned about the excessive work overload that exceed school hours: “It takes up time beyond school hours” (T94); “Some students expect an immediate response from the teacher and forget that she has a life and she cannot be available any time” (T102); “I think the main disadvantage is related to working hours. The learning does not end with the last bell, the teachers are not gratified for working beyond class hours” (T32); “They expect an immediate feedback, it compels the teachers to be always online, there’s no separation between the house-space and the work-space, it burdens with more work” (T97); “Ongoing connection in the afternoon hours, not all kids know how to disconnect and there’s no boundary” (T119).

Furthermore, a few teachers expressed their professional worries about dealing with the responsibility involved with being exposed online to students’ behavior. For example, “Broadening of the teacher’s responsibility over students to an additional domain without having skills or legitimacy to treat problematic behavior that they demonstrate on Face-book” (T107); “The teacher is often exposed to improper language, improper photos, and then she finds herself helpless regarding how to act” (T119).

Inequity Issues

Only 3 teacher statements referred to this category, mentioning the fact that not all teachers and not all students are connected via Facebook, furthermore not all the connected students are involved in the learning-related interactions online: “Not all the teachers are connected” (T144); “Not all the students have a Facebook profile” (T50); “Not all the students cooperate with the group, and then there’s a situation in which some students are involved and some are not. [Those who are not involved] feel left out [in class]” (T102).

Technological Aspects

Only 2 teacher statements were coded under this category, referring to two aspects. One statement addressed the lack of awareness to several Facebook features which can cause exposure of information about the teacher: “Facebook users are not always aware of all the options of the software, teachers included. Students may succeed in accessing [information about] the teacher’s personal life through mutual friends” (T121). The other statement also referred to information exposure, raising concerns about lack of control: “Facebook is not in absolute control of the user. On my Wall, you can write things to me, tag me, sometimes without my permission or knowledge. Until I notice, students could see the published [information]” (T172).

Distribution of the seven categories referring to negative aspects in the four groups of teachers (by their connection type) is summarized in Table 3. Here again, we checked for differences between the groups using multiple response set procedure. Overall, Pearson Chi-Square test resulted in a non-significant difference, with $\chi^2(21)=22.65$, at $p=0.36$. We tested for differences between each pair of groups and found no differences.

Table 3. Distribution of the seven categories referring to negative aspects in the four teacher groups

Category	Exposure to Information and Privacy	Paradigm Shift of Student-Teacher Relationship	Improper Behavior and Identity Issues	Boundaries	Inequity Issues	Technological and Socio-Technological Aspects	No negative aspects
<i>Connected</i>	19	7	4	14	2	0	3
<i>Wannabe Connected</i>	36	16	10	33	0	0	5
<i>Not Wannabe Connected</i>	24	16	7	15	0	2	4
<i>Not on Facebook</i>	7	7	1	7	1	0	0

DISCUSSION

Teacher-student interactions are key to teacher-student relationship, which are known to be associated with teachers' professional-development and well-being (Caires, Almeida, & Vieira, 2012; Spilt et al., 2011), as well as with students' academic, social, and emotional growth (Birch & Ladd, 1998; Davis, 2003; Hamre & Pianta, 2001; Sabol & Pianta, 2012). As social networking sites (SNS) are very popular, interactions are often extended to the virtual media, continuing schooling beyond time and space boundaries. While many studies about SNS and learning have focused on academic aspects (Greenhow & Askari, 2017; Manca & Ranieri, 2016), in our study we explored benefits and pitfalls of teacher-student connections on Facebook, as perceived by middle- and high-school teachers.

Overall, we found that teachers who were connected to their students de facto, as well as teachers who expressed a wish to be connected to their students, acknowledged the advantages of befriending their students on Facebook, in terms of teacher as well as student benefits. In terms of students' benefits, SNS-mediated communication allows accessibility beyond boundaries to their teachers. In that sense, this communication might be considered out-of-class communication. Indeed, a recent meta-analysis shows that student-instructor out-of-class communication is beneficial for students, both in affective and cognitive aspects of learning (Goldman et al., 2016). Out-of-class communication may facilitate a feeling of comfort between teachers and students and assist teachers in better knowing their students; this, in turn, may lead to sharing of personal information, as well as openness (Nadler & Nadler, 2000). Despite some differences between traditional and SNS-mediated out-of-class communication via online social networks, the latter was also found to be associated with better student-teacher relationship and with better classroom environment (Abd Elhay & Hershkovitz, 2019). These contribute not only to students, but are also beneficial for teachers, as teachers would be better informed about their students from a broader perspective and would be able to better facilitate learning in the classroom and beyond it.

Emphasizing that point, the Connected teachers in our study referred to both satisfaction- and instrumental help-related benefits rather evenly, highlighting the appreciation of closer relationship with their students. In contrast, the Wannabe Connected teachers mostly referred to a more practical (i.e., instrumental) point of view, as observed by the relatively high number of statements mentioning

teacher's possibility to assist their students, compared to statements exhibiting feelings of closeness. Hence, despite SNS serving as a platform for promoting closeness, the teachers who would like to connect to their students but are not connected *de facto* mostly see the efficiency aspects in using these platforms. This is in line with our previous findings, according to which Wannabe Connected, compared with the Connected teachers, perceived teacher-student SNS-mediated communication as more professional and learning oriented (Forkosh-Baruch & HersHKovitz, 2018). Also, it was shown that after participation in social media activities, teachers (and students) appreciate the social and functional opportunities afforded by these platforms, and not only the learning-related possibilities (Schouwstra, 2016).

Furthermore, this difference between the two sub-group of teachers portrays an ongoing course of development which refers to the role of media technologies in education altogether. As Livingstone (2012) contemplated, "Are these simply learning tools [...] Or do they herald a more fundamental transformation in learning infrastructure?" (p. 20). Following that question, Livingstone suggested that utilization of digital media did not reflect its fullest capacity within the educational milieu. The current study exhibits a more positive trend according to which social media may have the potential to facilitate the desired change in "relations between pedagogy and society, teacher and pupil, knowledge and participation" (Livingstone, 2012, p. 20), thereby creating a paradigm shift.

Looked at from a broader perspective, having high expectations from a digital technology prior to, rather than after, experiencing it is not limited to the educational field and has been an inclination for many years. As it seems today, the Internet has not dramatically changed large systems that govern our life, such as public administration or law (cf. Rethemeyer, 2007; Whiteman, 2017); early messages about a "new order" enabled by the Internet (e.g., Rushkoff, 2003) are nowadays softened by emphasizing the advantages of new media along with realizing their limitations (Coleman, 2017). In this sense, and in light of our findings, experiencing SNS can serve best in appreciating online media limitations.

As our findings suggest, teachers' overall viewpoint on the negative aspects of Facebook-connections with students is multifaceted. This complexity is reflected in our data by at least two points. First, the richness of negative aspects of Facebook-mediated communication recognized by teachers. Second, the fact that some of these aspects were also considered by our research population as positive. Specifically, three themes were mentioned both as concerns (while asked about negative aspects) as well as benefits (when asked about positive aspects): exposure to information, paradigm shift of student-teacher relationship, and boundaries. This demonstrates the complexity of using social networking sites for both personal and professional purposes, as management of the shared content becomes challenging (Fox & Bird, 2017). Teachers, knowing their own weak spots, might want to share personal information with their network-friends, but may fear that their students will be exposed to it (Akçayır, 2017; Sumner, Esfer, & Yildirim, 2014). This is also evident in a recent study, showing that teachers report less privacy concerns, more ethical concerns, and higher levels of social intimacy when referring to their willingness to befriend their students on Facebook (Kuo, Cheng, & Yang, 2017). Interestingly, the very same complexity was also found prominent in a parallel study taken from students' point of view (HersHKovitz & Forkosh-Baruch, 2017, 2019). An interesting research path may involve yet another important stakeholder, namely, parents. A preliminary study in this direction had recently revealed a discrepancy in parents' and teachers' perceptions of both sides' communication; for example, while parents prefer communicating with their children's teachers via multiple digital platforms, teachers prefer limiting this communication to only a few digital environments (Forkosh-Baruch, 2018).

Taken together, these concerns should be examined in the context of an atmosphere of change, which characterizes the field of education in recent decades. As part of this change, teachers are no longer seen solely as conveyers of information, but also as mentors and role models for their students, responsible for their academic, social, and emotional well-being (Goble & Porter, 1977; Harden & Crosby, 2000; Oser, Dick, & Patry, 1992). This, in turn, has highlighted some major issues fo-

cused on the relationship between teachers and their students, which are still discussed to this day, e.g., self-disclosure, or boundaries between professional and personal lives (Alsup, 2006; N. Bishop, 1996). These issues are magnified by the use of social media, due to information immediacy, availability, accessibility, and volume.

Interestingly, according to our findings, there are no differences between the teachers' groups in the distribution of the categories related to negative aspects of teacher-student Facebook connection. This might be a result of the overemphasis on negative aspects of online communication in the mass media (J. Bishop, 2014; Stern & Odland, 2017; Young, Subramanian, Miles, Hinnant, & Andsager, 2017). Indeed, the blurring of boundaries between personal and professional lives is perceived as a major challenge for many other professionals in the social media era (Conradie, 2015; DeCamp, Koenig, & Chisolm, 2013; Jameson, 2014; Ventola, 2014).

In spite of efforts of education systems, negative aspects of teacher-student SNS-mediated communication diffuse into schools and homes, highlighting harmful incidents over potential benefits. Our findings indicate that teachers' expectations prior to connecting with their students are of a "fuller" relationship than they are in practice. We believe that these expectations should be preserved and actualized, as such a connection may assist teachers and students to thrive (professionally for the former; academically, socially and emotionally for the latter). Of course, teachers should be equipped with means for dealing with such issues and also should be guided in a way that will assist them to further develop their professional identity, which is crucial for technology adoption (Liu & Geertshuis, 2016; Tondeur, van Braak, Ertmer, & Ottenbreit-Leftwich, 2017).

Unfortunately, often educational policymakers decide to bypass the need to deal with negative aspects of teacher-student SNS-mediated relationship, banning altogether this means of communication. We do not support such an approach, which takes away the decision-making responsibility from students, teachers and school authorities. However, we do not approve an "act-as-you-wish" approach. Instead, we agree with Ahn, Bivona, and SiScala (2011) and believe that—like any other school-related controversial issue—such policies should be discussed and concluded "in house", in full collaboration with students, school staff, and parents, and in a way that will best reflect school values and beliefs.

Of course, this study is not without limitations. First, it was situated in a single country, characterized by a specific culture of education, technology, and implementing technology in schools. Our findings should be validated by similar studies in other countries. Second, it was referring to a single social networking site; as not all the SNS are to be considered the same, the study should also be replicated with regards to other SNS; this will allow to examine the specific features that make a given platform more appropriate than the other for teacher-student communication. Additionally, even when considering this narrowed-down point of view, the sampled population is not to be considered as representing the whole teacher population in the country discussed here. Despite these limitations, we feel that the contribution of the current study is of importance for promoting a better teacher-student communication via SNS and a better teaching in the digital age at large.

CONCLUSIONS

In conclusion, our study highlights the complexity of using social networking sites by teachers. Educators appreciate the benefits of integrating these platforms into their professional practices while acknowledging various concerns (Köseoglu, 2017; Šimandl, 2015). As evident in our study, higher levels of positive attitudes towards teacher-student Facebook-mediated communication were demonstrated prior to the establishment of the online connection, compared to reports by teachers who were communicating *de facto* with their students via Facebook. In order to preserve these levels of satisfaction from teacher-student SNS-mediated communication, teachers should be equipped, both in pre-service and in-service training, with means for dealing with the more complex issues involved in this communication.

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BIOGRAPHIES



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