Teacher-Student Relationship and Facebook-Mediated Communication: Student Perceptions

La relación profesor-alumno y la comunicación en Facebook: percepciones de los alumnos

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ABSTRACT

Student-teacher relationships are vital to successful learning and teaching. Today, communication between students and teachers, a major component through which these relationships are facilitated, is taking place via social networking sites (SNS). In this study, we examined the associations between student-teacher relationship and student-teacher Facebook-mediated communication. The study included Israeli middle- and high-school students, ages 12-19 years old (n=667). Student-teacher relationships were compared between sub-groups of students, based on their type of Facebook connection to their teachers (or the lack of such a connection); their attitudes towards a policy that prohibits Facebook connection with teachers; and their perceptions of using Facebook for learning. Regarding students' attitudes towards banning student-teacher communication via SNS and towards using Facebook for learning, we found significant differences between three groups of students: those who do not want to connect with their teachers on Facebook, those who are connected with a teacher of theirs on Facebook, and those who are not connected with a teacher of theirs but wish to connect. Also, we found significant associations between student-teacher relationship and student-teacher Facebook-mediated communication. We argue that in the case of student-teacher Facebook-mediated communication, there is a gap between students' expectations and in-practice experience. The key to closing this gap lies in both policy and effective implementation.

RESUMEN

La relación profesor-alumno es crucial para un aprendizaje y una enseñanza exitosos. Actualmente, la comunicación entre alumnos y profesores –factor esencial que facilita estas relaciones– sucede a través de las redes sociales. En la presente investigación examinamos las asociaciones entre la relación alumno-profesor y la comunicación alumno-profesor mediatizada por las redes sociales. La muestra incluyó a alumnos israelíes de educación media y secundaria de 12-19 años de edad (n=667). Se comparó la relación alumno-profesor entre sub-grupos de alumnos de acuerdo al tipo de conexión con sus profesores en Facebook (o la falta de conexión), sus actitudes hacia la prohibición de conexión por Facebook con los profesores, y sus percepciones acerca del uso de Facebook para el aprendizaje. Con respecto a las actitudes de los alumnos en relación a la prohibición de comunicación alumno-profesor vía redes sociales, así como el uso del Facebook para estudiar, encontramos diferencias significativas en tres grupos de alumnos: aquellos que no se interesan por conectarse con sus profesores en Facebook, aquellos que se conectan con sus profesores en Facebook, y aquellos que no están conectados con sus profesores, pero que desean hacerlo. Encontramos asociaciones significativas en la relación alumno-profesor y la comunicación alumno-profesor mediatizada por Facebook. En esta última existe una brecha entre las expectativas del alumno y la experiencia práctica. La clave para cerrar esa brecha se basa en las normas y la implementación efectiva.

KEYWORDS | PALABRAS CLAVE

Social networking sites, student-teacher relationship, student-teacher communication, student perceptions, mediated communication, Facebook.

Redes sociales, relación profesor-estudiante, comunicación profesor-estudiante, percepciones de estudiantes, comunicación mediada, Facebook.

1. Introduction

Social networking sites (SNS), like Facebook, have been widely adopted and have changed the way people around the world communicate with each other. SNS educational usages have been extensively discussed, however mostly with regards to their pedagogical benefits (Greenhow & Askari, 2017; Manca & Ranieri, 2017). In this study, we take a different approach for examining the role of SNS in education, as we explore student-teacher relationship in real life and their relationship to student-teacher SNS-based communication. The underlying assumption for this line of investigation is twofold. First, student-teacher relationships are vital to successful learning and teaching (Birch & Ladd, 1998; Davis, 2003; Hamre & Pianta, 2001; Sabol & Pianta, 2012). Secondly, SNS are first and foremost intended to facilitate social interactions. Hence, the focus on student-teacher relationships via SNS is a more natural area of research with reference to these platforms. Furthermore, as social uses are an integral part of today's new media, it is important to highlight these aspects of students' and teachers' everyday digital life (Gutiérrez & Tyner, 2012).

Some intriguing questions have been raised regarding student-teacher connections on SNS and their effects on student-teacher relationships in real-life, and vice versa (Manca & Ranieri, 2017). Even the very term used in many SNS to describe connected users, friends", may challenge the common student-teacher hierarchy, as traditionally teachers are allowed some power over their students even when close relationship between the two are developed (Ang, 2005; Vie, 2008). Notwithstanding, as a result of blurring of time and space boundaries (MacFarlane, 2001; Scardamalia & Bereiter, 2006), teachers' role at large is constantly changing in the information era. SNS-based communication plays a major role in this change, extending the scope and setting in which teachers and students communicate, even more than traditional online platforms such as learning management systems. This may affect, in turn, mutual perceptions and beliefs (Mazer, Murphy, & Simonds, 2009), thereby changing student-teacher relationships and traditional hierarchical structures in schools.

For this reason, school authorities and policymakers have been pondering about their position regarding student-teacher SNS-based communication, often banning teacher-student communication via SNS altogether. In Israel, where the study reported in this article was conducted, the Ministry of Education first adopted such a banning policy; however, about a year and a half later, the regulation was refined, emphasizing the educational benefits of SNS, and allowing restricted SNS-related communication (Israeli Ministry of Education, 2011, 2013). Internationally, banning teacher-student SNS-mediated communication is an issue of debate in many countries. Teacher-student communication via social media was barred in several regions in the US and in Australia (Queensland Department of Education, Training and Employment, 2016; Schroeder, 2013) while other regulators have chosen to warn rather than ban, as in the case of Ireland, where it is formally stated that "Teachers should [...] ensure that any communication with pupils/students [...] is appropriate, including communication via electronic media, such as e-mail, texting and social networking sites" (The Teaching Council, 2016: 7). Public discussion on teacher-student communication via SNS reflects the complex nature of this issue and demonstrates the difficulty in adapting novelties in large-scale systems and organizations. However, most policies are not based on empirical evidence.

In this study, we focus on the secondary school population that was under-researched until very recently (Hew, 2011) and only in recent years this population has started to be studied (Asterhan & Rosenberg, 2015; Blonder & Rap, 2017; Fewkes & McCabe, 2012). Hence, our objective is to explore the relationships between students' perceptions of teacher-student relationship and student-teacher Facebook-mediated communication. We pose the following research questions:

• How is student-teacher communication facilitated on Facebook?
• What are students' attitudes towards a banning policy of SNS-mediated communication with teachers?
• What are students' attitudes towards the use of Facebook for learning?
• How is student-teacher Facebook-friendship characterized de-facto?
• What are the differences in students' perceptions of student-teacher relationships, based on the following variables? a) Type of student-teacher Facebook-connection; b) Types of Facebook-mediated communication; c) Attitudes towards SNS-banning policy; d) Attitudes towards the use of Facebook for learning; and e) The teachers' profile type used to connect with students.

2. Methodology

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. Our target population was students in lower and higher secondary schools. Informed consent was attained through the online questionnaire.

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 students and teachers via groups and only for learning purposes; before that, any teacher-student SNS-based communication was prohibited.

2.1. Research variables
2.1.1. Independent variables

• Communication via Facebook. We asked about the initiation of the student-teacher Facebook-connection and the means by which it is facilitated (in case a connection existed), e.g., Facebook groups, private chat, users' Wall, and Event pages. Also, we asked about the type of teacher's profile preferred by students to connect with

(whether connected or wished to be connected). Additionally, we asked whether the teacher with whom the student is, or wants to be, connected is a homeroom teacher or not.

• Attitudes towards Facebook-use in Education. We measured students' attitudes towards Facebook usage for learning and their level of agreement with a banning policy (that is, when student-teacher interactions via SNS are prohibited).

> Teachers' role at large is constantly changing in the information era. SNS-based communication plays a major role in this change, extending the scope and setting in which teachers and students communicate, even more than traditional online platforms such as learning management systems. This may affect, in turn, mutual perceptions and beliefs, thereby changing student-teacher relationships and traditional hierarchical structures in schools.

2.1.2. Dependent variables:
Teacher-student relationship

Students' perception of a teacher-student relationship was based on the three axes of Ang's (2005) TSRI framework, namely Satisfaction (refers to experiences reflecting positive experiences between students and teachers), Instrumental Help (when students refer to teachers as resource persons, such that they might approach for advice, sympathy, or help), and Conflict (referring to negative and unpleasant experiences between students and teachers).

2.2. Instruments and procedure

We used an adapted version of the Teacher-Student Relationship Inventory (TSRI), originally developed to measure teacher-student relationships as reported by teachers regarding a given student, using 14 items graded on a 5-point Likert scale (1: completely disagree, 5: completely agree) (Ang, 2005). The questionnaire was translated to Hebrew and changed to measure a student's perceptions of teacher-student relationship regarding a given teacher. For example, the item I enjoy having this student in my class was translated to "I think this teacher is enjoying having me in his/her class". The full, adapted questionnaire appears in Table 1 (see next page). We will refer to this new version as TSRI-S.

The TSRI was implemented as part of an online survey, using Google Forms. Within this form, students were asked about their current use of, and their connections with teachers via Facebook. Following their answers, they were guided to choose a teacher to whom they will refer while replying TSRI, based on the following four groups of students:

• Students who have an active Facebook account and are connected to a current teacher of them. These students filled out the questionnaire regarding a current teacher with whom they are connected on Facebook.

• Students who have an active Facebook account, are not connected to a current teacher, but are interested in

such a connection. These students filled out the questionnaire regarding a current teacher with whom they would like to be connected on Facebook.

Table 1. TSRI-S, adapted from TSRI (Ang, 2005)		
#	Axis	Item
1	Satisfaction	I enjoy having this student in my class
2	Instrumental Help	If the student has a problem at home, he/she is likely to ask for my help
3	Satisfaction	I would describe my relationship with the student as positive
4	Conflict	This student frustrates me more than most other students in my class
5	Satisfaction	If this student is absent, I will miss him/her
6	Instrumental Help	The student shares things about his/her personal life
7	Conflict	I cannot wait for this year to be over so that I will not need to teach this student next year
8	Conflict	If this student is absent, I feel relieved
9	Instrumental Help	If this student needs help, he/she is likely to ask me for help
10	Instrumental Help	The student turns to me for a listening ear or for sympathy
11	Conflict	If this student is not in my class, I will be able to enjoy my class more
12	Instrumental Help	The student depends on me for advice or help
13	Satisfaction	I am happy with my relationship with this student
14	Satisfaction	I like this student

• Students who have an active Facebook account, are not connected to any current teacher, and are not interested in such a connection. These students filled out the questionnaire regarding an arbitrary current teacher of theirs.

• Students who do not have an active Facebook account filled out the questionnaire regarding an arbitrary teacher.

We also asked about participants' views on positive aspects of student-teacher connections using Facebook. Participants who indicated that they were already connected to one of their teachers, and those who indicated they wished to be connected to one of their teachers, were also asked the following question: "How [does/could] this connection on Facebook is/be helpful to you?".

2.3. Population

Altogether, 667 students participated in this study. They were between 12-19 years of age (M=14, SD=1.6). There were 403 females (60%) and 264 males (40%). As a result of the ubiquitous accessibility to the online form, participants were from all over Israel.

2.4. Analysis

As some of the variables were not normally distributed, we used non-parametric comparison tests, specifically Mann-Whitney U Test and Kruskal-Wallis H Test, using IBM SPSS software, Version 23. Participants' responses to the open-ended items were coded using the directed content analysis method (Hsieh & Shannon, 2005), with variables derived from the Ang's (2005) framework.

3. Findings

We divided the research population (n=667) into four sub-groups of students:

• Connected students (n=67, 10%), who have at least one of their current teacher as a Facebook-friend.

• Wannabe Connected students (n=124, 19%), who do not have any of their current teacher as a Facebook-friend, but would like one of their current teacher to be a Facebook-friend.

• Not Wannabe Connected students (n=396, 59%), who do not have any of their current teacher as a Facebook-friend and do not wish to have on.

• Not on Facebook students (n=80, 12% of students), who do not have an active Facebook account.

3.1. Independent variables
3.1.1. Communication means

Among the Connected group (n=67), Group-based communication (either in open or closed Groups) was the most popular, with 33 students (49%) using it, followed by private chatting with the teacher, with 24 students (36%) mentioning using it. About a third of the students (22 of 67) mentioned hitting Like on teacher's status updates, and about fifth of the students (14 of 67) mentioned commenting on the teacher's updates. Less popular were communicating via Event pages (13%, 9 of 67), media upload/tagging/commenting (12%, 8 of 67), and writing

on the teacher's wall (4%, 3 of 67). All students mentioned at least one communication means, meaning that none of them keeps the connection to their teacher strictly passive.

3.1.2. Attitudes towards a banning policy

We asked students to what degree do they agree with a banning policy that prohibs any student-teacher connection via SNS. Considering only those students who had an opinion on that topic (n=482 of 667), 63% of the students (304 of 482) agreed or tended to agree with a banning policy, and 37% disagreed or tended to disagree with it (178 of 482). Analysis at the sub-group level, revealed that about 75% of the Not Wannabe Connected students (215 of 285) agreed or tended to agree with a banning policy while only 31% of the Connected group (19 of 49) and 39% of the Wannabe Connected group (29 of 94) agreed or tended to agree with it. This difference is striking and is statistically significant, with $+^*(2)=71.3$, at p<0.001. Comparing the Connected and Wannabe Connected groups results in a non-significant difference, with $Chi^2(1)=0.9$, at p=0.34.

3.1.3. Attitudes towards using Facebook for learning

We asked participants whether they think Facebook could be used for learning (without mentioning specific applications). Overall, 52% (349 of 667) responded with a Yes and 48% (318 of 667) responded with a No.

Regarding students who have Facebook accounts (n=587, 340 females and 247 males) in the Connected group, 57% of the students (38 of 67) thought that Facebook can be used for learning, compared to 77% of the Wannabe Connected group

Table 2. Can Facebook be used for learning? Students' responses based on type of connection (n=587)			
Type of Connection	Yes (% of group)	No (% of group)	Total
Connected	38 (57%)	29 (43%)	67
Wannabe Connected	95 (77%)	29 (23%)	124
Not Wannabe Connected	185 (47%)	211 (53%)	396
Total	318	269	587

(95 of 124) and 47% of the Not Wannabe Connected group (185 of 496). This difference is statistically significant, with $c2(2)=34.2$, at p< 0.001. Results are summarized in Table 2. Note the significant difference in answers between the Connected and the Wannabe Connected groups with $Chi^2(1)=8.1$, at p<0.01.

3.1.4. Friendship parameters

Of the Connected students (n=67), 25 (37%) were connected to their teacher's personal profile and the same number – connected to their teacher's professional profile. Additional 17 students (25%) did not know to which type of teacher profile they were connected. Of that group, 25 students (37%) were connected to their home-room teacher while the remaining (42 students, 63%) were connected to a disciplinary teacher who is not their homeroom teacher. Altogether, 17 students (25%) stated that they were the ones initiating the Facebook connection, 23 students (34%) mentioned that the teacher was the one to initiate the connection, and the remaining 27 students (40%) did not remember who initiated the connection.

Of the Wannabe Connected students (n=124), 24 (19%) stated that they would like to connect to their teacher's personal profile and about the same number stated they would like to be connected to their teacher's professional profile (26 of 124, 21%); the rest (60%, 74 of 124) did not have a preference about which teacher's profile to connect to. Also, 57 students (46%) stated that they wished to connect with their homeroom teacher, and the remaining (67 students, 54%) wished to connect with a disciplinary teacher who is not their homeroom teacher. The difference between the two groups regarding the type of teacher's profile to whom they are connected or wish to be connected (omitting the "Don't know/Don't care" options) is not statistically significant, with $Chi^2(1)=0.04$, at p=0.84.

3.2. Dependent variables
3.2.1. Reliability test and descriptive statistics

Reliability test for the adapted version resulted with high scores for Satisfaction (5 items, M=3.75, SD=1.1, Cronbach's α=0.88), Instrumental Help (5 items, M=2.75, SD=1.2, α=0.87), and Conflict (4 items, M=1.65, SD=0.9, α=0.88), all with n=667. Satisfaction and Conflict axes are highly skewed (their skewness values are: 0.92, 1.74, respectively) while Instrumental Help is rather normally distributed with the exception being a peak at the 1-value (skewness value of 0.14).

3.2.2. TSRI and de-facto connection on Facebook

We now compare between the distribution of TSRI axes across the four groups of students: Connected, Wannabe Connected, Not Wannabe Connected, Not on Facebook (n=667). The statistics are summarized in Table 3.

Satisfaction is significantly different between groups, with $Chi^2(3)=14.3$, at $p<0.05$, as well as Instrumental Help, with $chi^2(3)=38.5$, at $p<0.001$. Conflict is not significantly different, with $Chi^2(3)=0.9$, at $p=0.83$;

Table 3. TSRI-S values across student groups (n=667)			
Group	**Mean (SD) Satisfaction**	**Mean (SD) Instrumental Help**	**Mean (SD) Conflict**
Connected (n=67)	3.71 (1.02)	2.72 (1.20)	1.57 (0.77)
Wannabe Connected (n=124)	4.07 (0.89)	3.25 (1.09)	1.60 (0.92)
Not Wannabe Connected (n=396)	3.67 (1.08)	2.55 (1.11)	1.67 (0.96)
Not on Facebook (n=80)	3.72 (1.18)	3.02 (1.15)	1.70 (1.00)

comparisons utilized Kruskal Wallis H Test. For post-hoc tests, we ran pairwise Mann-Whitney U tests, using Bonferroni correction for multiple tests (i.e., dividing a by 6). Findings indicate that Satisfaction was only different between the Wannabe Connected and Not Wannabe Connected groups (Z=3.74, at p<0.01), with a higher mean for the former and an effect size of r=0.16.

Instrumental Help was different within three pairs of groups: Connected and Wannabe Connected (higher for the latter, with Z=3.10, at p<0.05), Wannabe Connected and Not Wannabe Connected (higher for the former, with Z=5.79, at p<0.01), and Not Wannabe Connected and Not on Facebook (higher for the latter, with Z=3.33, at p<0.05) with effect sizes of 0.22, 0.25, 0.15, respectively. Therefore, the mean for Instrumental Help was higher for students who wished to Facebook-connect with one of their teachers in comparison with those who were already connected to a teacher.

3.2.3. TSRI and communication type

Mann-Whitney U test on each of TSRI axes, comparing between using/not-using each communication means separately, revealed significant differences only in the case of using Groups and only for the Satisfaction and Conflict axes. The mean Satisfaction for students who communicate in groups with their teachers (n=33) was 4.07 (SD=0.59), compared with 3.36 (SD=1.22) for students who do not communicate in groups with their teachers (n=34), with Z=2.7, at p<0.05; this denotes an effect size of r=0.28. The mean Conflict for students who communicate in Groups with their teachers (n=33) was 1.37 (SD=0.55), compared with 1.77 (SD=0.9) for students who do not communicate in Groups with their teachers (n=34), with Z=2.02, at p<0.05; this denotes an effect size of r=0.25. In other words, students who communicate with their teachers via Facebook Groups feel more satisfied and less conflicted with their teachers in comparison with those students who do not communicate using Groups. There was no significant difference in Instrumental Help, with Z=0.40, at p=0.69.

3.2.4. TSRI and attitudes towards banning policy

For understanding differences in TSRI axes between students who agreed or tended to agree with the banning policy (n=304) and those who disagreed or tended to disagree with it (n=178), we ran a Mann-Whitney U test. The only significant difference was found in Instrumental Help, which was higher for students who disagreed or tended to disagree with a banning policy in comparison with those who agreed or tended to agree with it. This difference has an effect size of r=0.15. The results are summarized in Table 4.

Table 4. Comparing TSRI-S values based on attitude towards a banning policy (n=482)				
Ang's Axis	**Average (SD) over Students who Agree or Tend to Agree (n=304)**	**Average (SD) over Students who Disagree or Tend to Disagree (n=178)**	**Z (based on Mann-Whitney test)**	**Effect Size**
Satisfaction	3.70 (1.08)	3.85 (1.05)	1.70; p=0.09	---
Instrumental Help	2.64 (1.17)	3.00 (1.11)	3.26[**]	0.15
Conflict	1.64 (1.00)	1.69 (0.94)	1.34; p=0.18	---

[**] p<0.01

3.2.5. TSRI and attitudes towards Facebook for learning

For understanding differences in TSRI axes between students who think Facebook can be used for learning (n=349) and those who do not (n=318), we ran a Mann-Whitney U test. Results are summarized in Table 5.

Significant differences were found in Satisfaction and Instrumental Help; both were higher for students who believe that Facebook can be used for learning compared to those who do not believe so. These

Table 5. Comparing TSRI-S values based on attitude towards Facebook for learning (n=667)				
Ang's Axis	Average (SD) over Students who Think Facebook Can be Used for Learning (n=349)	Average (SD) over Students who Think Facebook Cannot be Used for Learning (n=318)	Z (based on Mann-Whitney test)	Effect Size
Satisfaction	3.86 (0.97)	3.64 (1.14)	2.04*	0.08
Instrumental Help	2.87 (1.13)	2.62 (1.16)	2.86**	0.11
Conflict	1.67 (0.93)	1.63 (0.95)	1.19; p=0.24	---

*p<0.05 **p<0.01

differences have effect sizes or r=0.08 and r=0.11, respectively.

3.2.6. TSRI and teacher profile

In the Connected group, 25 students are connected to their teacher using the teacher's personal profile and 25 are connected using the teacher's professional profile. Running the Mann-Whitney U test, we found no significant difference in any of the TSRI axes. Results are summarized in Table 6.

In the Wannabe Connected group, there are 24 students who want to connect with their teacher using the teacher's personal profile and 26 who want to connect using the teacher's professional profile. Running the Mann-Whitney U test, we found a significant difference with a medium effect for Satisfaction. Students who would like to connect with their teacher through the teacher's personal profile feel more satisfied with that teacher than the students

Table 6. Comparing TSRI-S values based on type of teacher's profile, for connected and wannabe connected			
Ang's Axis	Average (SD) for Teacher's Personal Profile	Average (SD) for Teacher's Professional Profile (n=50)	Z (based on Mann-Whitney test), Effect Size†
Connected (n=50)			
Satisfaction	3.76 (0.90)	3.95 (0.78)	0.90; p=0.37
Instrumental Help	2.71 (1.12)	3.06 (1.24)	1.02; p=0.31
Conflict	1.66 (0.81)	1.59 (0.88)	0.54; p=0.59
Wannabe Connected (n=24 for personal profile, n=26 for professional profile)			
Satisfaction	4.5 (0.66)	3.78 (0.83)	3.51***
Instrumental Help	3.43 (1.10)	3.15 (0.97)	1.08; p=0.28
Conflict	1.43 (0.86)	1.64 (0.83)	1.50; p=0.13

† for significant results only, *** p<0.001

would like to connect with the teacher through a professional profile. Results are summarized in Table 6.

3.3. Perceived and actual contribution to students

We now report on an analysis of the students' open-ended responses to the questions regarding the actual/potential contribution of communicating with their teachers on Facebook, which were coded by Satisfaction and Instrumental Help; these categories are not mutually exclusive. Of the 124 responses received by the Wannabe Connected students, 44 (40%) were coded as Satisfaction-related, and 76 (70%) were coded as Instrumental Help-related. Hence, the reasons for wishing to connect with teachers on Facebook were mostly on a practical level. For example:

"[The teacher] could update me easily and quickly about things that happened when I didn't come [to school]" (S344, F:14).

"[The teacher] could help me in the afternoon with school stuff if I needed help" (S87, M:12).

"That way, we could talk with the teacher and ask questions – it'd be much more comfortable than giving him a call" (S307, M:14).

"Things that you want to say to the teacher personally and you're too shy – it's possible using Facebook" (S586, M:17).

Still, a measurable amount of the responses indicated anticipation of a feeling of Satisfaction from this connection, as may be evident in the following examples:

"[The teacher] could ask me how I am, that's kinda nice" (S344, F:14).

"[The teacher] is just an interesting and quite a cool guy, it's just interesting for me what he's doing when he's not teaching" (S280, M:14).

"Teachers can participate in the lives of their students" (S560, F:16).

"It can strengthen the relationship between the teacher and the students and to cause the student to count on his teacher" (S592, F:17).

Of the 37 responses of the Connected students, 10 (27%) were coded as Satisfaction-related, and 31 (84%) were coded as Instrumental Help-related. While Instrumental Help is still the more frequent category among this group as well, the gap between this axis and the Satisfaction axis widened. To clarify the difference in distribution of these two categories between the two groups of participants, we performed a discriminant analysis; this statistical test was chosen due to the fact that the coding categories were interrelated, that is, a student's response could be coded in both categories. The emerging discriminant function significantly differentiated between the Connected and the Wannabe Connected students, with Wilk's $\Lambda=0.94$, $\chi2(2)=10.9$, at $p<0.01$.

4. Discussion and conclusions

In this article, we explored students' perceptions of student-teacher relationship in an era in which both parties are able to communicate via social networking sites (SNS). Recall that the original purpose of SNS was to promote social, interpersonal connections and communication. As suggested in this study, such connections and communication might also have important implications in the educational context. Overall, about 10% of our population had a teacher who was teaching them and with whom they were connected on Facebook, against the official policy which prohibited (and still prohibits) student-teacher friendship via SNS, demonstrating the need of students and teachers to connect in various out-of-class settings.

The most popular means of communication between the connected students and their teachers was via Facebook Groups, as shown in previous studies (Asterhan & Rosenberg, 2015). Students and teachers find Facebook Groups to be appropriate as they offer an easy one-to-many communication along with a relatively high level of privacy and a better separation of their learning-related discussions and their personal activity (Kent, 2014). Many studies have highlighted the educational benefits of such groups (Ahern, Feller, & Nagle, 2016; Da-Silva & Barbosa, 2015; Miron & Ravid, 2015; Rap & Blonder, 2016). We extend this literature by referring to the benefits of groups with regard to student-teacher relationship at large. This is evident, for example, by higher levels of Satisfaction and lower levels of Conflict for students who communicated with their teachers via Facebook Groups, compared to those students who were connected to their teachers on Facebook but did not communicate with them via groups. Interestingly, no difference in Instrumental Help was found between these two modes, which might indicate that students use private channels to discuss personal issues with their teachers (Hershkovitz & Forkosh-Baruch, 2013).

While about three-quarters of the Not Wannabe Connected students agreed or tended to agree with a policy that bans student-teacher communication via SNS, less than 40% of the Wannabe Connected students and less than a third of the connected students agreed or tended to agree with it. Hence, some students are interested in strengthening connections with their teachers outside school boundaries, and when doing so, they prefer to use platforms they already know and are competent in their usage (Deng & Tavares, 2013; Jang, 2015). On the other hand, we found that only about a half of the students believe that Facebook can be used for learning, in line with previous studies (Mao, 2014).

The difference in attitudes between the Connected and the Wannabe Connected groups highlights the difference between expected benefits from a Facebook-friendship of students with their teachers and the de-facto benefits. Students tend to perceive social media as an informal space used mainly for socialization, rarely in

> Besides policy, educational processes should be the key to a safe, effective implementation of SNS by teachers and students. This should be achieved via an open dialogue between all the relevant stakeholders, including policy-makers, practitioners, teachers, and students, and based on empirical data. The key role of the students in this discourse is not to be underestimated, as they are the leading force and natural inhabitants of SNS.

formal learning settings (Sánchez, Cortijob, & Javed, 2014; Selwyn, 2009); hence, due to their very nature as social virtual spaces, they should be examined through these lenses.

We also found some interesting results regarding the Wannabe students, which scored in the Instrumental Help axe higher than the connected students. Also, students who wished to connect to the teacher's personal profile scored in the Satisfaction axe higher than those who wished to connect to a professional profile. This may indicate the need for students to broaden the relationship with their teachers beyond the traditional, school-related setting, to the new online environments, extending real-life experiences (Hershkovitz & Forkosh-Baruch, 2013; Kert, 2011).

Nevertheless, in practice such satisfying expectations are not always fulfilled. Besides policy, educational processes should be the key to a safe, effective implementation of SNS by teachers and students (Stornaiuolo, DiZio, & Hellmich, 2013). This should be achieved via an open dialogue between all the relevant stakeholders, including policy-makers, practitioners, teachers, and students, and based on empirical data. The key role of the students in this discourse is not to be underestimated, as they are the leading force and natural inhabitants of SNS.

Based on our findings, we suggest that future research on this topic include wider and more diverse samples from different countries and cultures, as well as different types of SNS. This will assist in understanding how different social norms related to the education milieu are reflected in the SNS array; as a result, educational policies related to SNS may be better grounded in a local cultural context. Still, SNS are part of a wider, global phenomena; therefore, it is vital to examine their educational implications in a wider, international context, and to explore whether this situation reciprocates with educational settings.

Of course, this study is not without limitations. First, our research sample, attained from viral distribution of an online questionnaire, may be biased to some degree (Sax, Gilmartin, & Bryan, 2003); however, as recent studies show, online and traditional self-report questionnaires might be equivalent, and the former is perceived by participants as more protective of their anonymity (Ward, Clark, Zabriskie, & Morris, 2014; Weigold, Weigold, & Russell, 2013). In addition, this study was conducted in Israel, under some special circumstances related to an official policy of the Ministry of Education banning student-teacher connections via SNS; hence, participating students who were de-facto connected to their teachers were violating regulations. Therefore, results may be biased.

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