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Use of Facebook for the Community Services Practices course: Community of inquiry as a theoretical framework

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ABSTRACT

This study examines an online learning community created on Facebook (FB) for the Community Services Practices (CSP) course at the Faculty of Education, Karadeniz Technical University. The study aims to analyze FB group shares and prospective teachers' views in order to investigate the reflections of the teaching process that took place within the Community Services Practices course. The study was carried out with prospective teachers enrolled in the Computer Education Instructional Technology (CEIT) Teacher Training program. Its implementation entailed a case study with 92 prospective teachers, and the FB group was used as one of the main elements of the course in which students shared weekly discussion topics, social activities, and community service projects for 12 weeks. In this context, data were gathered via an analysis of the learning environment screenshots from the FB group. Furthermore, quantitative data gathered through multiple-choice, as well as open-ended questions, were presented with reference to frequencies and percentages, whereas qualitative data were presented in the form of themes, codes, and quotations. The study attempted to interpret the findings through the 'Community of Inquiry' (CoI) framework. In this vein, FB's social network supported a teaching presence for both the instructors and the students and enabled them to share responsibility for the teaching process. Moreover, the communication and socialization characteristics of FB directly contributed to the social presence of the learning groups created through this media. While the practices implemented over FB contributed to increased social sensitivity and awareness among prospective teachers, low-quality shares and irrelevant discussions in the FB group had negative effects on the learning environment.

1. Introduction

The last decade saw rising scientific interest in the way university students use FB and other social media platforms (Ranieri, Manca, & Fini, 2012). It has been suggested that FB has affected significant change, particularly on university students' social behaviors and practices in virtual environments (Kalpidou, Costin, & Morris, 2011). An extensive review of literature on this subject focused primarily on general uses of FB (Pempek, Yermolayeva, & Calvert, 2009); teacher–student interaction on FB (Teclehaimanot & Hickman, 2011); the relationship between social adjustment and FB use (Kalpidou et al., 2011; Manago, Taylor, & Greenfield, 2012); the impact of FB use on students' academic performance (Ainin, Naqshbandi,

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Moghavvemi, & Jaafar, 2015; Kirschner & Karpinski, 2010; Michikyan, Subrahmanyam, & Dennis, 2015); reflections of intercultural cooperative educational practices on FB (Wang, 2012); and university students thoughts on the use of FB for educational purposes (Roblyer, McDaniel, Webb, Herman, & Witty, 2010; Soomro, Kale, & Zai, 2014). More often than not, researchers conduct studies on FB through a systematic review method (Hew, 2011; Manca & Ranieri, 2013, 2016). The present study was conducted with university students enrolled at the Faculty of Education. A study on the use of social network sites (SNSs) by prospective teachers would help facilitate integration of technology and eliminate obstacles to the employment thereof (Greenhow & Askari, 2015).

Whether or not social network sites—FB in particular, the primary purpose of which is to provide social interaction and which is used widely among university students—can be used to support educational activities is in question (Donlan, 2014; Roblyer et al., 2010; Tinmaz, 2013). Recent studies indicate that two distinct views regarding the use of FB and similar SNSs for educational purposes have arisen. The first of these views argues that the media is actually designed to provide a 'private space' to students and instructors and hence should not be used for educational purposes. The results of some research explicitly note participants' views to that effect (Donlan, 2014; Hew, 2011; O'Bannon, Beard, & Britt, 2013; Prescott, Wilson, & Becket, 2013; Wang, Woo, Querk, Yang, & Liu, 2012). The second view claims that FB and similar SNSs used widely by students would definitely serve them well if they were used for educational purposes (Aghili, Palaniappan, Kamali, Aghabozorgi, & Sardareh, 2014; Arabacioglu & Akar-Vural, 2014; Celik, Yurt, & Sahin, 2015; Cerda & Planas, 2011; Miron & Ravid, 2015; Teclehaimanot & Hickman, 2011; Wang, 2012). According to this perspective, FB has great potential to facilitate learning experiences, and that potential should be utilized even though the site was not built for that purpose. This study, in line with the second view, investigates the potential benefits of the use of FB within the framework of a Community Services Practices (CSP) course.

Researchers who support the use of SNSs in an educational framework take into account the fact that students, as well as instructors, widely use SNSs; and they have studied how the networks could be incorporated into the learning processes of teachers, students, and social environments (Greenhow & Askari, 2015; Soomro et al., 2014). Facebook is considered an affordable teaching environment, as it is actually free of charge and offers highly usable tools (Hou, Wang, Lin, & Chang, 2015; Malita, 2011). Moreover, as a tool to facilitate communication among students and between the teacher and student, FB is an attractive media for educational activities (Demirel, 2012; Malita, 2011; Rap & Blonder, 2016; Teclehaimanot & Hickman, 2011). Facebook is also used for instructional purposes because it is easy to use, has interactive services, and is a user-based environment (Demirel, 2012; Soomro et al., 2014). Indeed, today's social networks in general—and FB in particular—are beginning to be compared and used as alternatives to Learning Management Systems (LMS) (Arabacioglu & Akar-Vural, 2014; Manca & Ranieri, 2016; Manca & Ranieri, 2013; Miron & Ravid, 2015; Wang, 2012; Wang et al., 2012).

'Learning' occurs not only in but also outside the school (Tinmaz, 2013). In this context, SNSs are able to offer teachers and students supplementary learning capabilities to enhance face-to-face participation occurring in the classroom. Social media's function in higher education is particularly prominent due to its ease of use as a technology and its ability to help create a positive learning community (Hung & Yuen, 2010). There remains, however, a degree of uncertainty regarding how FB and other SNSs can be best utilized in education (Greenhow & Lewin, 2016; Teclehaimanot & Hickman, 2011). Since SNSs are already—and will continue to be—used by students even after graduation, educators should adopt these technologies into education with a pedagogical basis (Fewkes & McCabe, 2012). The results of this study will offer educators useful information regarding the use of FB for educational purposes.

Using SNSs as a means of teaching would not necessarily lead to a positive result in the learning process (Hung & Yuen, 2010). To achieve effective results in educational processes that include SNSs, interaction among all elements (educators, students, and content) should be structured effectively (Garrison & Cleveland-Innes, 2005), and a structured mechanism should be implemented (Hung & Yuen, 2010). Therefore, an applicable theoretical framework should be implemented for the achievement of creative and critical thought through online platforms (Aghili et al., 2014). The need for a solid theoretical framework for studies on education through FB is often noted (Manca & Ranieri, 2016). The theoretical background employed in this study is based on the Community of Inquiry (CoI) framework. The aim of the CoI framework is to develop an effective learning community to ensure and support actual learning (Akyol, Garrison, & Özden, 2009). The framework developed for higher education in general, and asynchronous and text-based group discussions in particular (Garrison, Anderson, & Archer, 2010), can be used for face-to-face and mixed-learning environments, as well as online education with the intent to develop and support learning communities (Hosler & Arend, 2012). According to the CoI framework, learning is essentially about the interaction of three interconnected and dynamic elements within the community. These elements are social, cognitive, and teaching presence (Akyol et al., 2009; Garrison & Arbaugh, 2007; Garrison & Cleveland-Innes, 2005; Garrison, Anderson, & Archer, 2000). Furthermore, the categories and certain indicators pertaining to the CoI framework are also specified (Table 1). Such categories and indicators include tips for application and describe how each presence-related element should be realized in the learning environment.

'Social presence' refers to the projection of participants' personal characteristics into the community, among other individuals in parallel to real life cases (Garrison et al., 2000). Building on the components 'open communication,' 'group cohesion' and 'affective expression,' social presence (Garrison & Arbaugh, 2007), when provided in online learning environments, enables the participants establish relationships based on mutual trust, with a view to questioning knowledge (Lin, Kang, Liu, & Lin, 2016). Setting an appropriate learning climate is expected to enable higher orders of learning (Garrison & Arbaugh, 2007; Garrison et al., 2000). In other words, the execution of collaborative activities for a shared goal and inquiry, as well as open communication, contribute to high-quality learning outcomes by increasing feelings of

Table 1
Community of inquiry elements, categories and indicators (Garrison & Arbaugh, 2007, p. 159).

Elements	Categories	Indicators (examples only)
Social presence	Open communication	Risk-free expression
	Group cohesion	Encourage collaboration
	Affective expression	Emoticons
Cognitive presence	Triggering event	Sense of puzzlement
	Exploration	Information exchange
	Integration	Connecting ideas
	Resolution	Apply new ideas
Teaching presence	Design & organization	Setting curriculum & methods
	Facilitating discourse	Sharing personal meaning
	Direct instruction	Focusing discussion

camaraderie and levels of satisfaction levels among the students. 'Cognitive presence' is the ability of the participants to create and construct meaning through sustained communication or individual thought (Capra, 2014; Garrison, Anderson, & Archer, 2001). Cognitive presence refers to processes in 'triggering event,' 'exploration,' 'integration' and 'resolution' categories (Garrison & Arbaugh, 2007). In order to achieve cognitive presence, the students must focus on specific topics or problems, and venture into the process of coming up with solutions through critical thinking and discourse. Trying to achieve a higher order of thought, the process expects the participation of the students in the learning experience, on both an individual and a group basis (Garrison & Arbaugh, 2007). Finally, 'teaching presence' has to do with the selection and organization of experience concerning learning and facilitation of the process (Garrison et al., 2000). Built on the processes of 'instructional design and organization,' 'facilitating discourse' and 'direct instruction,' teaching presence seeks to generate metacognitive awareness among the students, in addition to guiding the teaching process (Garrison & Arbaugh, 2007). To achieve teaching presence, teacher needs to plan and manage the teaching process, develop the social learning environment for an active and successful learning, and perform as an expert in her/his subject area (Anderson, Rourke, Garrison, & Archer, 2001).

The literature regarding this subject indicates that FB, like other social networks, naturally supports a combination of social, cognitive, and teaching presences (Rap & Blonder, 2016). That is why the present study implemented at a higher-education level via the FB group employs CoI as the applicable theoretical framework. Aghili et al. (2014) noted that CoI could be used formally with FB and other SNSs to support higher education. Garrison and Arbaugh (2007) note the need for empirical studies for the widespread embrace of the CoI framework as a feasible online learning theory. A study carried out with university students, focusing exclusively on CoI framework's social presence component, reviewed the posts and comments of the FB group. The findings of the study revealed that the indicators of social presence were utilized extensively by the students (Gordon, 2016). Kucuk and Sahin's (2013) experimental research with undergraduate students utilized the CoI framework on a FB group to facilitate the teaching process, where the experiment group saw the use of the platform for group activities, synchronous and asynchronous discussions, and the sharing of course materials. In conclusion, their study reported that the section which utilized a FB group for the teaching process with reference to the 'group cohesion' category of social presence and the 'exploration' category of cognitive presence achieved higher grades compared to the other section. Yet separate research carried out with undergraduate students, which investigated the relationship between the components of the CoI framework on FB reached the conclusions that the media offered an environment conducive to online debate, and contributed to critical thinking (Ozturk, 2015). The execution of similar studies regarding FB, with specific components of the CoI framework in mind, would, therefore, play a crucial role in terms of understanding how social networks can be used effectively for educational purposes. The present study, on the other hand, utilizes the CoI framework particularly for the interpretation of its findings.

The study aims to investigate the reflections of the teaching process taking place within the Community Services Practices course by analyzing FB group shares and the views of the prospective teachers. The CoI framework provided the theoretical infrastructure of the study. The following sub-questions were investigated against this background:

1. With regard to the applied framework pertinent to the teaching process and the CSP course content, what was the nature of the instructor's and prospective teachers' shares via the FB group?
2. What do the prospective teachers think about the teaching process implemented?

The next section describing the study begins by discussing with the provision of information regarding the arrangement of the CSP course and the specifics of the data collection process. The third section presents the findings with reference to screenshots and survey data. The discussion and conclusions section reflects on the online learning environment implemented via the FB group within the CoI framework, and in light of the literature, this section also presents the results of the research. Finally, the limitations and implications of the study are discussed, followed by a number of recommendations that takes the limitations into account.

2. Methods

This investigation employed a case study research method since it provides the researcher with the opportunity to engage in a detailed and in-depth review of an event (Creswell, 2007) in a concrete real-life environment (Yin, 2003). A holistic single case study was utilized (Yin, 2003). A private FB group was created for the purpose of providing a venue for prospective teachers enrolled at Department of Computer Education and Instructional Technology (CEIT); the prospective teachers could share their content concerning the CSP course within the confines of the group. In Turkey, the CEIT programs offer the 'Community Services Practices (CSP)' course during the student's third year. The primary purpose of the course is to instill prospective teachers with awareness and understanding of social developments (Gunes & Keles, 2011). Within the framework of the CSP course, prospective teachers are required to identify current societal issues; develop community service projects that provide solutions; and take part in meetings, such as panels, conferences, conventions and symposia as audiences, speakers or organizers. Furthermore, the students are expected to volunteer for various social services in the area, engage in teamwork while doing volunteering, and exhibit skills of cooperative work (KTU, 2016). Through community service projects, prospective teachers are afforded the opportunity to communicate with various groups in society (i.e., elderly, disabled, children) and have a glimpse at the structure and operation of government agencies and non-governmental organizations (Gunes & Keles, 2011). Moreover, the CSP course helps prospective teachers develop communication skills, solidarity, feelings of responsibility, and the sensitivity required to produce solutions aimed at addressing extant issues. It also provides the students with an opportunity to socialize (Elma et al., 2010). In a nutshell, all of these activities implemented within the framework of the CSP course are intended to contribute to the prospective teachers' personal development. The present study conducted via an online FB-created learning community, and implemented within the framework of the CSP course, is noteworthy with regard to the research problem it presents, with reference to the community's reflections on prospective teachers.

A glance at the literature reveals that similar studies have been conducted via a FB group created for educational purpose (Cerda & Planas, 2011; Hou et al., 2015; Malita, 2011; O'Bannon et al., 2013). Some of these studies, in a vein parallel to this one, implemented the research process with reference to weekly topics (Dyson, Vickers, Turtle, Cowan, & Tassone, 2015; Lockyer & Patterson, 2008). In light of earlier studies, such as Malita (2011), the present study began with the creation of a new FB account, for the management of the research process. A side benefit, one may argue, was to provide a more relaxed environment for prospective teachers.

2.1. Participants

The study participants are 92 third-year prospective teachers enrolled in the CEIT department of a state university in Northeastern Turkey. Forty-seven of the participants are enrolled in daytime education, and 45 are enrolled in evening education programs. The average age of the participants is 22.5; standard deviation is 1.75. Thirty-eight of the participants in the study group are female, and 54 are male.

Out of all participants, 90 owned a computer at the time of data collection. Seventy-four participants had access to Internet at their homes, while 46 has access at school, 28 at their dorms, 24 at Internet cafés, and 3 at work. The most popular social network among the participants was FB, which was used by 94.6% of the participants. Thirty-six prospective teachers used FB for an average of less than 1 h per day. Twenty-four participants (26.1%) used the site for an average of 1–2 h per day, and 14 participants (15.2%) used it for 2–3 h per day. Finally, 15 prospective teachers used FB for more than 3 h on an average per day.

2.2. Procedure

Nınety-two prospective teachers and the researcher, who was also the instructor of the course, posted relevant content and views on a private group set up on FB for the CSP course. The private FB group allows only the members to find the group and share content through it (Miron & Ravid, 2015). The choice to make the FB group a private one, which would allow photos and videos regarding the project to be shared without discomfort, was made in order to maintain the privacy of the individuals participating in the social responsibility projects executed within the framework of the CSP course. Furthermore, the instructor verbally reminded the prospective teachers to avoid sharing the group content with third parties.

The sharing experience with the FB group took 12 weeks. That time frame covered the setting up of the groups, ensuring the participation of the students, and the students' video presentations of their completed projects on FB at the end of the semester. The whole research process, including the application of initial and final surveys, took approximately 14 weeks. The literature contains some examples of comparable semester-long studies on the use of SNSs for formal educational purposes (Baran, 2010; Dyson et al., 2015; Lockyer & Patterson, 2008).

Prospective teachers enrolled in the CEIT program were asked to post content concerning the course as well as to exchange views with their friends via the FB group. Course content refers to 1) weekly discussion topics, 2) social activities taking place within or outside the school, and 3) community service projects carried out by the group (Fig. 1). One hour of classroom interaction per week was maintained alongside interaction facilitated by the FB group. Classroom-based sessions provided the students a venue to make verbal presentations regarding their weekly work.

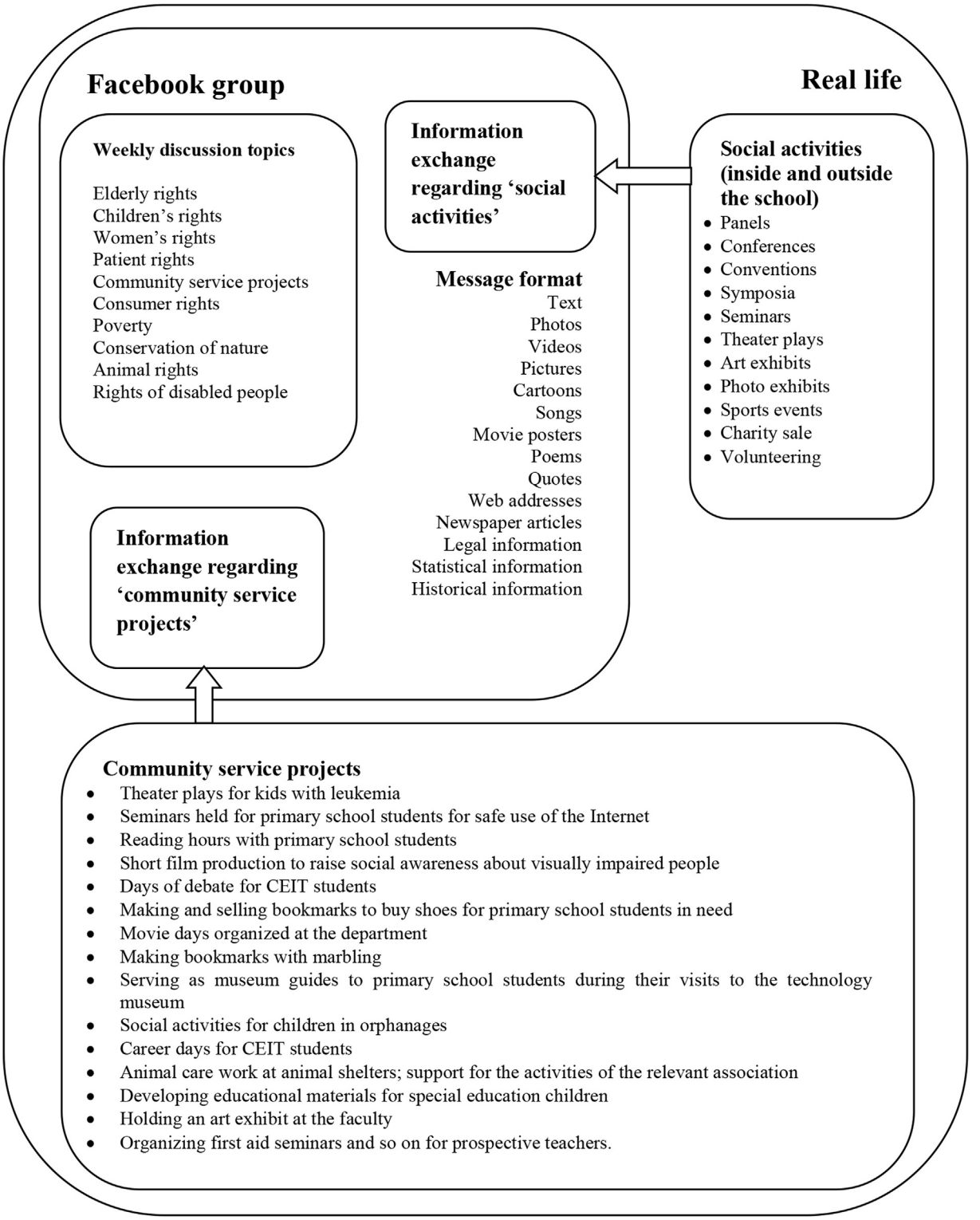

Fig. 1. Scope of the CSP course.

2.2.1. Weekly discussion topics

Weekly discussion topics were brought up by the researcher to enable all participants to share their opinions with the FB group. The questions to facilitate discussion included: 1) What is charity?; 2) Why do people help each other?; 3) Name a few women who changed the course of history?; and 4) Does our society have a sufficient level of awareness regarding child care? The topics were selected with a view to making prospective teachers think about different societal groups and their problems. Prospective teachers not only responded to the questions, but they also exchanged their views on these issues. During the discussions, students were allowed to use text, photos, and other message formats in the FB group (Fig. 1).

2.2.2. Social activities

The participants also used the FB group to post photos and details regarding the 'social activities' in which they took part both inside and outside the school, on an individual or group basis.

2.2.3. Community service projects

For a period of nearly 10 weeks, the participants were asked to provide weekly reports on the FB group about the developments regarding the 'community service projects' carried out in groups of 4–5.

The role of the researcher was to start and lead the discussions, engage all students by asking various questions regarding their projects, offer positive feedback, and provide students with out-of-the-box examples. However, she served mostly as an observer in the group so as not to obstruct the flow of input. In order to encourage active participation, in the beginning of the study, group members were informed that their participation would determine a certain percentage of their final grade in the course. Establishing a link between the applied part of the course and the final grade is a common practice employed in similar studies (Baran, 2010; Wang, 2012).

2.3. Data gathering tools

The study used Snagit screen capture and recording software to take snapshots of all shares made via the FB group. Snagit was used each week, from the beginning to the end of the study, to take screenshots of the group shares so as to enable subsequent analysis.

The study also employed questionnaires in order to get the gist of what individual prospective teachers thought and to come up with a more complete picture regarding conclusions. In this context, two distinct questionnaires were applied: one at the beginning of the study and one at the end. The initial questionnaire included multiple-choice and open-ended questions to assess demographic characteristics of the study group and the group's use of the Internet in general, and FB in particular. That questionnaire asked for general information such as how prospective teachers access the Internet or how many hours each day FB account owners spend on the site. The data gathered in the initial survey is presented in the methods section of the study in order to provide an accurate picture of the participants.

At the end of the semester, prospective teachers were presented another questionnaire comprised of multiple choice and open-ended questions to get their views on the process of using FB for the CSP course. The second questionnaire investigated prospective teachers' frequency of use of the FB group created for the CSP course, the reasons stated for its use, and the experiences prospective teachers had with the group. The questions presented included: "How frequently did you use the FB group for Community Services Practices?/—Frequently/Rarely/Never. Because … . …"; "What were the positive/negative impressions you had with the FB group created for the CSP course?"; and "Do you think your interactions in the FB group created for the CSP course had a positive or negative impact on your communications with your friends?"

Both questionnaires were paper-based, and all participants completed them at the same time. The use of paper-based questionnaires helps prevent the exclusion of students who have issues regarding Internet access (Khan, Wohn, & Ellison, 2014). Making sure that all participants filled in the questionnaires simultaneously allowed the researcher to save time and effort. In order to present a comprehensive picture of the participants' perspectives, the results section used the coding scheme PT1, PT2, PT3, etc., to identify the participants who took the final questionnaire.

2.4. Data analysis

The study reviewed all correspondence that was sent or shared via the FB group, week-by-week, and came up with the frequency and averages for the types of shares initiated by the instructor and the prospective teachers (i.e., text, video, photos) and involvement in weekly discussions (i.e., the average number of participants in the discussion, the average number of comments). Furthermore, a number of screenshots were taken from the FB group to provide a sample of the data in the findings section, where the participants were represented with their assigned code-names.

Data gathered through the first questionnaire was presented in terms of frequencies and percentages. These referred to demographic data and the use of Internet, such as access to Internet and the hours spent on FB. While some data from the second questionnaire was presented in terms of frequencies, most of the data was presented through content analysis. In the first phase of content analysis 'common statements, words, and expressions' were color coded. Color coding gave the researcher a clear understanding of the extensive data gathered (Fewkes & McCabe, 2012). Color-coded data were also reviewed to come up with common themes, quotations, and code frequency. In order to present a holistic picture of FB use for the CSP course, codes derived from eight questions were pooled together to develop an integrated scheme under a shared

category (Fig. 7). Fig. 7 denotes the codes as positive (+), negative (−) or neutral (0). The codes which do not entail any positive or negative characters were included in the final category.

In order to come up with valid results, the researcher first reviewed data gathering tools employed in the literature. Furthermore, the questions directed in the context of the study were finalized in consultations with specialists in the field. Reliability was achieved through a review of coding for qualitative data with reference to specific time frames. Finally, codes thus established were checked by two distinct researchers to ensure the falsifiability and consistency of qualitative data. To establish inter-coder reliability rates, the formula proposed by Miles and Huberman (1994) was used; this determined a reliability rate of 0.85. An agreement rate of 0.80 would suffice to indicate good qualitative reliability (Miles & Huberman, 1994). Given the size of the dataset, the reliability assessment was based on approximately 30% of the data as a whole, selected randomly.

3. Results

In order to examine the impact of the teaching process implemented through the FB group for the Community Services Practices course, this section will first discuss the findings with reference to the shares in the group. This section will also address the prospective teachers' thoughts regarding the learning-teaching environment implemented over the FB group.

3.1. Instructor and prospective teachers' CSP course-related shares within the FB group

The FB group used within the framework of the CSP course provided a venue for shares by both the instructor and the prospective teachers, regarding the weekly discussion topics, activities at and outside the school, and social responsibility projects implemented as a group (Fig. 1). Table 2 presents the findings regarding such shares. A glance at the types of shares by the instructor and the prospective teachers in the FB group leads to a categorization of shares as text, video, photos and pictures, poems and quotes, web addresses, newspaper articles, etc. The 'others' category refers to FB surveys created for extracurricular topics, shares regarding special days and weeks, and announcements and shares about other courses. Among all of the instructor's shares, text shares were most frequent. The instructor sought to achieve a number of distinct objectives through such text shares. These included providing information to prospective teachers about the weekly discussion topics, ensuring that the students focused on or had a distinct perspective regarding the discussion topics, and making announcements about the course. In addition, the instructor also used text shares in the FB group as a means of honoring valuable work carried out within the course. An example of this type of share includes the statement that reads, "*These are the model behaviors I want to see in this course. I want to thank you all.*" At times, the instructor asked questions to single individuals, larger groups, or the whole class, with the aim of ensuring that members participated in the FB-facilitated learning-tracher process. Furthermore, using questions to encourage deeper insight, the instructor tried to prevent the debate from being constrained to only a superficial discussion; this also served to prompt rather silent prospective teachers to voice their opinions. Statements such as "*Can you please tell me?," "What would you say on this?" and "Like what?*" are examples of the querying questions employed to ensure an in-depth debate. Participants expressed diverse opinions in response to some of the topics covered in the weekly debates, which prompted the instructor play an intermediation role using statements such as "*… let's talk about it and reach to a common ground'" or "… every opinion is valuable in its own right*." The instructor was observed to most frequently share her views on children's rights (11), and women's rights (6). Prospective teachers, on the other hand, were observed to express their views through different types of shares. With regard to the weekly debates, most of the prospective teachers' shares included photos and images, followed by text, video, and URL shares. These shares were intended to increase awareness among the FB group members with respect to the weekly discussion topics, to state one's personal views about the topic, and at times, to defend one's position. A striking feature of the prospective teachers's shares was that they were more frequent during the first three weeks and the ninth and tenth weeks of the process. However, with reference to specific topics, one can observe that the shares regarding community service projects, poverty, and conversation of nature could be limited in numbers and scope (Table 2).

The tendency to share frequently, particularly during the initial weeks of the study, was probably associated with the high number of members, different individuals repeatedly sharing given content, and some of the members simply sharing their own content. Indeed, PT2 expressed some concern about this state of affairs, whereupon the instructor encouraged prospective teachers to make sure to have read fellow members' shares, and to comment on them (Fig. 2). PT20, in turn, stated that instead of repeating the same shares over and over, it would be better to share information that would be of benefit to society, and that such shares would be of value because they would increase awareness of different shares. A number of participants liked PT20's statement. Fig. 2 presents a dialog which could serve as an example of how the responsibility for the teaching process was shared among the instructor and the students. Some prospective teachers who did not check the group content very frequently, however, were observed to repost similar pieces of content in subsequent weeks as well, which yielded the instructor's occasional warnings (Fig. 3). Mirroring the instructor's warnings, PT57 and PT58 also asked the group members to avoid sharing longer texts; PT20 confirmed this view by noting that the participants did not read longer texts (Fig. 3).

The diversity of the prospective teachers shares is particularly striking. It is evident that at times the prospective teachers tried to make use of humorous elements (Fig. 4), while at others they tried to share with their peers the results of their Internet-based research (Fig. 5). A glance at the contents of the shares made on the FB group with respect to weekly discussion

Table 2
Weekly discussion topics covered on the FB group, and the FB group screenshot data regarding such topics.

Weekly discussion topics	Type of shares by the instructor and prospective teachers														Analyses regarding weekly discussions					
	Text		Video		Photos and pictures		Poems and quotes		Web addresses		Newspaper articles		Others		Number of questions directed by the instructor	Average number of comments by the instructor	Average number of discussion participants	Average comment count	Average number of likes received for comments	Average length of discussion (Days)
	I	PT	I	PT	I	PT	I	PT	I	PT	I	PT	I	PT						
Elderly rights	2	34	–	11	–	20	–	26	–	26	–	12	–	3	2	4	44	73	112	4
Children's rights	11	22	–	25	–	1	–	17	–	15	–	4	–	1	4	3	43	64	126	4
Women's rights	6	32	1	26	–	43	–	29	–	9	–	12	–	1	3	14	30	129	219	3
Patient rights	3	13	–	8	–	12	–	3	–	8	–	2	–	1	2	3	15	23	37	2
Community service projects	3	1	–	–	–	2	–	1	–	–	–	–	–	1	3	4	20	30	32	4
Consumer rights	3	10	–	6	–	11	–	1	–	9	–	1	–	1	2	3	13	21	24	3
Poverty	1	9	–	3	–	8	2	3	–	5	–	–	–	2	1	6	29	46	86	4
Conservation of nature	4	7	–	8	–	11	–	3	2	12	–	–	–	–	2	7	16	49	40	4
Animal rights	5	5	–	4	–	21	–	1	2	6	–	5	–	–	2	10	37	84	82	4
Rights of the disabled people	5	4	–	18	–	15	–	3	–	14	–	4	–	–	1	8	28	48	191	3

I: Instructor, PT: Prospective Teachers.

Fig. 2. Screenshot showing multiple shares with the same content.

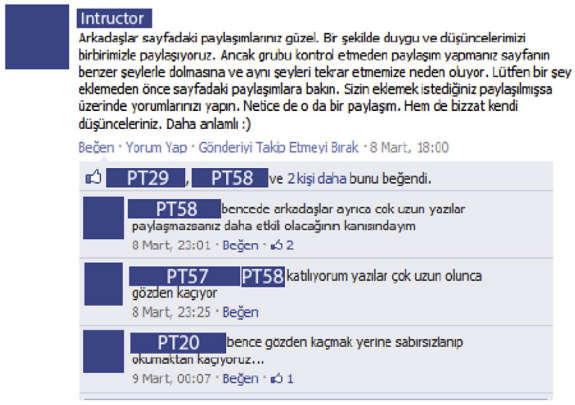

Fig. 3. Screenshot showing some feedback provided to prospective teachers.

Fig. 4. A screenshot of a share with a humor element.

Fig. 5. A screenshot of a share about the information derived through the study.

topics reveals that the prospective teachers employed the element of humor primarily to raise awareness of social problems, and they included Internet search results to provide one another with information about their legal rights.

The prospective teachers were found to make frequent use of the "like" symbol in FB (Table 2). The prospective teachers were also observed to like and comment on other members' shares, especially when those other members were part of their respective smaller circles of friends, which they developed through personal contact in the offline teaching environment (small circles of 3–5 close friends).

Long texts shared by some prospective teachers in the FB group, with respect to the weekly discussion topics bored some, and drew some reaction. Such extended shares were, more often than not, copy-and-paste replicas of certain texts available on the Internet. Prospective teachers were provided feedback to encourage the sharing of their perspectives derived from such texts, rather than copying them verbatim (Fig. 6). For instance, when PT75 shared a lengthy text via copy-and-paste, PT12 used humor to voice his discomfort with the length of the text (Fig. 6).

Each week the instructor directed a number of questions to prospective teachers, with the aim of facilitating an exchange of opinions about the weekly discussion topics, as well as sharing related texts, videos, and photos within the FB group. Table 2 reveals that the number of questions, which varied from week to week. The highest number of questions posed by the instructor (4) were related to children's rights. Women's rights (3 questions) and community service projects (3 questions)

Fig. 6. Screenshot showing an extended text share.

were close behind. The questions directed to prospective teachers were interpreted over average figures they aroused. For instance, on the week dedicated to children's rights, a total of 4 questions were directed to prospective teachers in the FB group. Forty-three prospective teachers were involved in the subsequent discussion, with an average of 126 likes being received for relevant comments. From this perspective, Table 2 reveals that the most active participation regarding the questions directed by the instructor was observed with elderly rights (44 participants), and children's rights (43 participants). The prospective teachers' comment counts on specific topics, on the other hand, were led by the discussion on women's rights (129), and animal rights (84). The highest number of likes for the debates on weekly discussion topics was received for the discussion on women's rights (219), followed by rights of the disabled people (191). The comparable numbers concerning other topics, namely patient rights, community service projects, consumer rights, poverty, and conversation of nature, were quite low, however (Table 2). The highest number of instructor comment were observed on women's rights (14), followed by animal rights (10). The prospective teachers' discussion related to the questions the instructor presented with respect to the weekly discussion topics were observed to take two to four days from start to finish.

3.2. The prospective teachers' views regarding the teaching process implemented over the FB group

The responses given by 92 prospective teachers about the practice implemented through the FB groups in the CSP course were then subjected to a quantitative analysis. Table 3 shows the frequency with which the prospective teachers used the FB group, as well as the influence their interactions over the group had on the interactions they had with their friends.

The analysis revealed that 55 prospective teachers used the FB group frequently, while 34 used it rarely, and 3 did not use it at all. Forty-one participants stated that the interaction within the FB group enhanced the CSP course and had a positive impact on their communication with their friends, while 34 noted no impact whatsoever. Seven prospective teachers stated that the interactions within the framework of the CSP course had both positive and negative impacts on them, while 8 participants reported only negative impact. Finally, 2 prospective teachers did not provide any response. The details presented in Table 3 are discussed further in Fig. 7 in the form of qualitative findings, alongside other data obtained from the most recent survey.

Table 3
The use of the FB group and its influence on communication.

Cases reviewed	Responses provided by the prospective teachers				
Frequency of FB group use by prospective teachers	Frequently 55	Rarely 34	Never 3		
The effect interactions over the FB group had on interactions with their friends	Positive impact 41	No effect 34	Both positive and negative impacts 7	Negative impact 8	No response 2

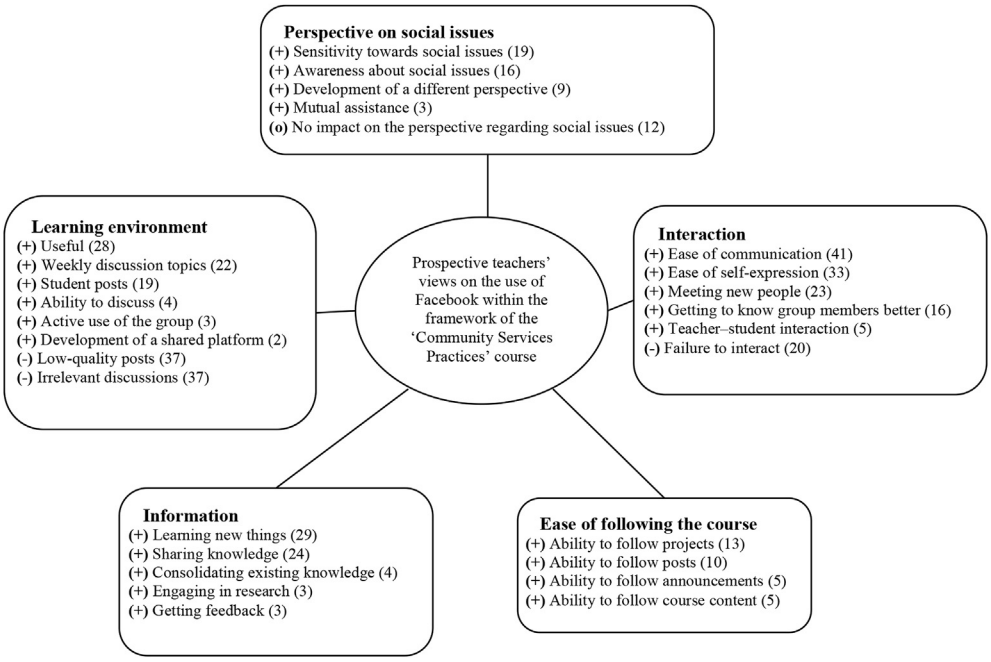

Fig. 7. Integrated scheme representing the views on the use of Facebook within the framework of the CSP course.

The responses provided by prospective teachers with respect to the FB group for the CSP course were also subjected to qualitative analysis. The codes assigned to specific responses, the number of prospective teachers who responded under such codes, and associated codes were combined to establish specific themes. The findings of the content analysis are presented in Fig. 7. In the figure, positive, negative and neutral codes are represented with +, -, and o, respectively.

The data from this analysis can be presented under the following themes: 'perspective on social issues,' 'learning environment,' 'information,' 'ease of following the course,' and 'interaction' (Fig. 7). The following section presents each theme, the codes covered by each theme, the number of students expressing each theme, and verbatim quotes from students.

3.2.1. Perspective on social issues

The 'perspective on social issues' is a theme developed on the basis of the views expressed by prospective teachers with reference to the use of FB within the framework of the CSP course. The aspects with positive codes the prospective teachers mentioned under this theme were 'sensitivity towards social issues' (19), 'awareness about social issues' (16), 'development of a different perspective' (9), and 'mutual assistance' (3). 'No impact on the perspective regarding social issues' (12) was noted by prospective teachers as a negative code.

> I have witnessed different cases, from different perspectives. I learned to be sensitive to the experiences of people, even if it is not directly related to me. (PT30)
>
> It made me think 'apparently, these are elements of real life'; and I came to witness some usual negative aspects of life. (PT66)
>
> I can't say it affected me too much. Our perspectives regarding social events are already well established. It only helped me see different opinions. (PT33)

The CSP course is offered to increase prospective teachers' sensitivity to social events (Fig. 8). Thus, the FB group was established to instill awareness among prospective teachers through weekly discussion topics. In particular, practices aiming to develop awareness and sensitivity regarding social issues were found to be only partly effective. For example, 12 prospective teachers noted that they already had a certain level of social awareness, and hence the shares in the FB group had no significant impact on them in this context.

3.2.2. Learning environment

The positive codes prospective teachers mentioned for the 'learning environment' theme were 'useful' (28), 'weekly discussion topics' (22), 'student posts' (19), 'ability to discuss' (4), 'active use of the group' (3), and 'developing a shared platform' (2).

> Having discussions on a pre-determined topic each week, and exchanging views on projects with our instructor and friends was a nice experience. (PT51)
>
> Topics, as well as the shares, were interesting. The shares over the group also helped us get a taste of various perspectives. (PT52)
>
> The shares about the group projects were nice. It is really nice to see such efforts leading to good things for the people. (PT65)

Fig. 8. Screenshot of a share on the 'perspective on social issues' theme.

Some participants noted that use of the FB group within the framework of the CSP course was useful. They referred to the practice as necessary, effective, good, and a 'model one.' Furthermore, the posts about the weekly discussion topics received acclaim among prospective teachers. A screenshot on 'weekly discussions' is provided in Fig. 9. Nineteen prospective teachers liked the content such as texts, videos, or images shared by group members on weekly discussions, and 4 prospective teachers stated their satisfaction with the practice of engaging in weekly discussions (Fig. 7), while others shared posts about some special days, such as mother's day or the Gallipoli Campaign, that were not associated with the course. Even posts concerning other courses were observed in the FB group. There are, however, certain negative codes voiced under the 'learning environment' theme. These are found as 'low-quality posts' (37) and 'irrelevant discussions' (37).

> There were obvious copy and paste posts just for sharing something, and people did shares without reading others posts. (PT74)
>
> I witnessed people with different opinions failing to tolerate each other. (PT8)

Some participants described some of the posts as 'running a quick search online, copying the first thing they come across, and pasting it to share with the FB group.' Prospective teachers stated that such behavior did not help with the quality of posts. Since the FB platform allows participants to express their opinions freely, it caused conflicts among some participants. Some prospective teachers tried to push their proposed solutions about social issues on others, which led to a certain level of tension within the group. Additionally, because posting in the FB group was mandatory and represented a percentage of students' final grades, students sometimes posted excessively, leading, at times, to lower quality shares. Finally, 32 prospective teachers voiced their dissatisfaction with their participation/non-participation in the FB group and how it affected their grades.

3.2.3. *Information*

Participants' positive statements regarding the 'information' theme are 'learning new things' (29), 'sharing knowledge' (24), 'consolidating existing knowledge' (4), 'engaging in research' (3), and 'getting feedback' (3) (Fig. 2).

> Posts on regulations drew my attention. The rights I didn't know about. . . . I got to learn about them. (PT5)
>
> Having people engage in research and post their knowledge led to a nice environment. (PT39)
>
> The 'rights', a regular topic we dealt each week, helped us remember many things. (PT62)

Fig. 9. A screenshot on the 'learning environments' theme.

Getting feedback on projects or products thereof was a good practice in terms of hearing praise or criticism about the product, and allowing improvement. Furthermore, it allowed all to post their views with the group. (PT13)

Prospective teachers found weekly posts on topics very informative. In particular, the shares regarding the legal rights of various societal groups (i.e., children, women, elderly) were deemed effective. The participants stated that through such shares they were able to remember the social responsibilities they would otherwise forget. The screenshots providing examples under the 'information' theme are provided in Figs. 10 and 11.

3.2.4. Ease of following the course

Participants' views regarding the 'ease of following the course' also revealed that they had positive opinions about this theme. The codes under this theme were 'the ability to follow projects' (13), 'the ability to follow posts' (10), 'the ability to follow announcements' (5), and 'the ability to follow course content' (5).

Having an eye on what other groups were doing was good for me. Otherwise, I'd not be aware of what they were doing. (PT5)

I used the group to follow the announcements and posts concerning the course. (PT13)

I followed the posts. It was as if the course was taught on a virtual environment. (PT62)

Prospective teachers' statements regarding this theme revealed that they used the FB group to follow all projects implemented by student groups in the course (Fig. 12), as well as all posts and announcements. Five prospective teachers stated that they followed the course contents over the group posts.

3.2.5. Interaction

Most participants involved in the study had positive feedback on 'interaction,' and their views on this theme were analyzed under five distinct codes: 'ease of communication' (41), 'ease of self-expression' (33), 'meeting new people' (23), 'getting to know group members better' (16), and 'teacher-student interaction' (5).

I got the chance to communicate with other people in my department, with whom I hadn't had any contact before. The group offered me a place to express myself comfortably. (PT67)

The ability to communicate at any moment, whenever you like it. That's really nice. (PT4)

Fig. 10. A screenshot on code 'learning new things'.

Fig. 11. A screenshot on code 'getting feedback'.

> We were able to reach out to each other (group members) much more quickly. Checking our profiles, we were able to get to know each other outside the course as well. . . . Ability to contact the instructor quickly is also very good. (PT62)

The prospective teachers stated that, thanks to the FB group, they were able to communicate with each other much more easily, and they got the chance to know each other better. They believe that communication over FB is easier, uninterrupted, and fast. Apparently, FB profiles also helped the prospective teachers get to know each other better over their personal profiles, in addition to their posts via the group. Fig. 13 provides a screenshot on the 'ease of self-expression' code under the 'interaction' theme.

'Failure to interact' (20) was the sole negative code voiced with respect to 'interaction' (Fig. 7). The major reasons leading to failure to communicate over the FB group were 'shyness towards group members' (11), 'shyness towards the instructor' (4), and 'the inability to express themselves.'

> Usually I was able to express myself [over the FB group]. I say 'usually' [not always] since many could see my posts. (PT57)

> I wasn't very comfortable; as the group included many students I didn't know personally. (PT32)

> Knowing that the instructor can see my posts had some impact [on not posting]. (PT47)

Some prospective teachers had been affected negatively by the crowded FB group and the inclusion of other individuals they had just met. Furthermore, the presence of the instructor in the group led some prospective teachers to shy away from expressing their views.

Some of the participants voiced their inability to make effective use of the FB group. The justifications provided can be classified under the codes 'Internet access problems' (13), 'FB taking too much time' (10), 'preference for face-to-face contact' (6), 'not using Facebook much in general' (5), 'avoiding repeating posts' (2), and 'a dislike for the Internet' (2).

> I had trouble getting online as I live in a dorm. (PT51)

> Reading all the posts takes so much time. (PT21)

> I would prefer face-to-face interaction with my friends. (PT45)

> I did not want to post something just for the sake of posting. I kept track of all developments, but I didn't post much. (PT31)

Fig. 12. A screenshot on code 'the ability to follow projects'.

Fig. 13. A screenshot on code 'ease of self-expression'.

Prospective teachers complained because of the time required to properly follow the FB group. In particular, participants had difficulty following posts during busy periods. Some students staying at dorms had problems with Internet access.

4. Discussion and conclusion

At this junction, the results reached were investigated along the lines of the Community of Inquiry (CoI), which constitutes the theoretical framework of the study. The state of affairs to arise due to use of the FB group within the framework of the CSP course was reviewed with reference to teaching, cognitive, and social presence.

4.1. Teaching presence

Prospective teachers who participated in the study posted significant content in the FB group concerning the course (Fig. 1). Prospective teachers' posts and group members' comments to these posts led to a particularly high level of student–student interaction regarding daily life, controversial weekly topics, and students' high-level verbal reasoning skills. The practices with the FB group had a positive impact on the prospective teachers' awareness of and sensitivity to social issues; hence, one of the course objectives was met. The prospective teachers posts (e.g., texts, images, videos, cartoons), with reference to weekly discussion topics, helped students further their interests in social issues. Similar studies done with FB groups also use sharing of content, videos, and links (Malita, 2011), as well as images and cartoons (Pimmer, Linxen, & Gröhbiel, 2012). This suggests that the use of multimedia elements for the purpose of teaching via social networks could contribute to enriching the course content. According to the CoI framework, the instructor's primary responsibility concerns 'teaching presence,' but students should still share some of the duties and roles of the instructor (Akyol et al., 2009; Garrison et al., 2000). In conclusion, students and instructors share responsibility in the teaching process when interacting over SNSs such as FB, which offer the ability to post various elements including videos, pictures, documents, links, and texts.

According to Akyol et al. (2009), weekly discussions carried out in online learning environments enrich the course through different infrastructures and experiences. In the present study, the instructor initiated and directed weekly discussion topics, facilitated the consideration of the topic from different perspectives, and ensured continuity and frequency of posts in terms of the flow of information within the FB group. The questions presented to prospective teachers, with respect to weekly discussion topics, facilitated the introduction of the prospective teachers to the online inquiry process, which is in line with the nature of the CoI framework. The instructor's guidance is crucial, however, for the flow of information as part of the teaching process implemented (Rap & Blonder, 2016). In this context, the instructor was observed to have a preference for text as the primary type of shares she employed (see Table 2). This preference was mostly dictated by the instructor's role that necessitated that she present course-related questions, and her will, exhibited through her feedback, to direct participants toward making shares in line with the course objectives. Leading the participants to 'critical thought' and encouraging timely feedback contributed to a healthy learning process (Hosler & Arend, 2012). However, the instructor's leadership role should be strong in order to be able to facilitate higher-level thought and knowledge through triggered discussions (Garrison & Cleveland-Innes, 2005). Only such a positioning is sufficient to provide effective 'teaching presence' through the teaching process. In the context of the present study, the instructor's interest in the students' responses, comments thereon, as well as her questions directed at the students, not to mention her role in ensuring that discussions took place with reference to the objectives of the course, might have played some part in facilitating discourse. Further, to facilitate discourse, the instructor sought to bring about a more insightful debate through questions intended to encourage the prospective teachers to dig deeper; to this end, the instructor also served as mediator between participants with opposing views. This study, however, found that participants' substantial interest was due not only to the instructor's leadership but other factors as well. Deng and Tavares (2013) associate online engagement with components that are technological, individual, and community-based in nature. As such, the present study considers these factors when reflecting on the academic grading system, the willingness of prospective teachers to get to know each other, the use of the FB group for quick dissemination of course announcements, and the feedback provided by the instructor. Feedback provided to the students is also among the elements that contribute to teaching presence (Garrison & Arbaugh, 2007).

4.2. Cognitive presence

According to Garrison et al. (2000), in higher education, 'cognitive presence' is relatively easier to achieve. In this study, the participants' posts contributed to the production of new knowledge as well as to the exchange and reinforcement of existing knowledge. Hou et al. (2015) maintain that FB in particular, given its social capabilities, is an ideal environment for students to construct knowledge through social interaction. Much research (Baran, 2010; Demirel, 2012; Miron & Ravid, 2015; Prescott et al., 2013; Wang et al., 2012) done at the undergraduate and graduate levels found that the use of FB for educational purposes facilitates the ability to receive and share information about course contents. The present study found, however, that the students' shares in the FB group were more frequent during the first and last few weeks of the term. One could argue that the students were simply more interested in the topics discussed on those weeks. However, the time frame in question also corresponds to the beginning and the end of the academic semester. Therefore, the increase observed with regard to the number of prospective teachers' shares in the earliest and final weeks of the process may have something to do with the

higher levels of academic motivation in the earlier and final stages of the semester, suggesting higher levels of cognitive presence.

The posts in the FB group showed that sometimes participants focus too much on the quantity of content rather than the quality. Some prospective teachers engaged in 'copy and paste' posts regarding weekly discussion topics, by using the first results they get from a simple Google search. It is believed that the motivation for excessive posting was due to the role share counts played in determining the course grade. Garrison and Cleveland-Innes (2005) categorized students' perspectives on learning as 'deep,' 'surface,' or 'achievement-based.' In this categorization, the deep perspective is prioritized. Surface learning involves simply carrying out the assignment rather than internalizing the knowledge. The achievement perspective is based on an external reward to encourage learning. That reward often takes the form of a high grade. In the present study, the prospective teachers who strove to maintain high post counts in the FB group perhaps embrace the 'achievement perspective' for learning. Numerous posts within the FB group had the side effect of increasing the number of notifications to participants' private profiles, leading to dissatisfaction for some. Other studies in the literature note that irrelevant shares, and the difficulty of checking shares (Coklar, 2012), as well as excessive numbers of notifications (O'Bannon et al., 2013), are among the major issues haunting FB groups created for educational purposes. In a traditional classroom setting, students get to speak in their individual turns in a well-ordered manner, which may allow the learners to understand and internalize the topic discussed. However, on SNSs where many try to post content simultaneously, following all posts and the accumulation of excessive volumes of information in the learning environment can quickly evolve into a problem for the participants. The literature concurs that failure of the participants to regularly and quickly follow all shares on the media used poses an obstacle to developing a high-quality discussion via Facebook, leading to a negative impact on cognitive presence (Kirschner, 2015). In the present study, the higher number of comments received, and the extended time frames of the weekly discussions (see Table 2), arguably made it difficult for the participants to follow the group posts, reducing cognitive presence along the way. Limiting the number of participants could possibly help in developing an effective discussion and learning environment on Facebook. Indeed, Aragon (2003) notes that the ideal participant count for online learning communities is between 20 and 30. According to Akyol et al. (2009), the number of participants in online learning communities is crucial to the success of the teaching process. However, the high number of participants in the FB group in this study, and the excessive number of participant posts, may have excessively burdened prospective teachers' cognitive loads. This suggests that the excessive number of participants in online learning communities created on SNSs may pose an obstacle to cognitive presence.

By allowing them to express themselves easily in the virtual environment and by providing such a venue outside the classroom, Facebook groups help students who have problems interacting in class environments (Dyson et al., 2015). The use of FB for educational purposes also helps students in terms of mutual understanding and critical thinking (Manca & Ranieri, 2013). Discussions over asynchronous posting help group members examine given issues from different perspectives (Stein et al., 2007). One study shows that discussions over FB make interaction among participants easier compared to online discussion forums, and help the students to focus on the topic at hand. However, the FB group participants tended to drift into off-topic discussions much more frequently compared to the online forum users (Hou et al., 2015). This study found that while some prospective teachers indicated their satisfaction with the comfortable environment, which allowed them to voice their opinions, others had complaints regarding the structure of the FB group and asked for a more formal and structured environment. The reason they felt dissatisfaction is that some participants shared course-related posts that made others uncomfortable. Topics such as nature and women's rights are hot topics for the larger society as well as for study participants. The difficulties experienced when having such debates via the FB group can be partly attributed to the weak social culture of debating in our society. Kirschner (2015) argues that one of the reasons precluding argumentation and discussion over Facebook is the media's tendency to create communities of people with similar mindsets, and that, in contrast, argumentation requires conflicts of opinion. In the present study, however, participants with different interests and worldviews were brought together under the umbrella of the CSP course. Therefore, the individuals involved had differences of opinion required for meaningful argumentation and discussion, yet, on occasion, they had difficulty in reaching agreement through discussion. One can also argue that the virtual environment gives students an opportunity to express views and ideas that they cannot express freely in a face-to-face classroom environment. Certain limitations of written communications, and their proneness to misunderstandings (Aragon, 2003), have affected the characteristics of the debates on social networks, and have, at times, prevented them from reaching concrete conclusions. According to Pimmer et al. (2012), even though FB offers its users a certain level of ability to interact, it is not an ideal environment for in-depth debates. Facebook groups enable users to focus on specific topics, conduct comprehensive debate regarding those topics, and share related information. It is important for students to engage in this information-sharing process in a conscious manner in order to achieve course objectives and cognitive presence.

4.3. Social presence

The most frequently voiced perspective regarding the use of FB for the CSP course had to do with its ability to facilitate communication. As a dynamic and active social platform, FB is used by the students on a daily basis (Rap & Blonder, 2016). The fact that the vast majority of the participants in this study were already FB users may have motivated them to follow the FB group. The prospective teachers in the research group also emphasized the interaction aspect of the practice. FB provides students with fast and easy access to instructors and other students (Miron & Ravid, 2015; Prescott et al., 2013). The scale of freedom the instructor provided to the prospective teachers in the FB group arguably played a role in the risk-free expression

of social presence. The prospective teachers stated that, thanks to the FB group, they were able to express themselves better, meet new acquaintances, and more easily get to know group members. Michikyan et al. (2015) reviewed students' wall posts and status updates in order to analyze their academic disclosure, and the researchers found that the students used FB to announce their academic standing (fail/pass) to their close circles. In other words, FB is inherently an indirect means of communication where individuals express their thoughts and emotions. The present study, however, helped group members get to know each other better through FB group posts. Furthermore, the prospective teachers were afforded the opportunity to get to know other group members better by viewing their respective FB profiles. Other studies also note that undergraduate students became FB friends through interaction initiated via FB groups, and had, therefore, the chance to get to know each other better (Baran, 2010; Wang et al., 2012). By providing people the chance to get to know others without actually spending time face-to-face (Pempek et al., 2009), FB reinforces virtual communication culture and social learning (Cerda & Planas, 2011; O'Bannon et al., 2013). The communication and socialization characteristics of FB contribute directly to the social presence of the learning groups created through this media. Some participants shared various posts regarding commemorative days or weeks (e.g., the Gallipoli Campaign), which were unrelated to the course. These posts are signs of social presence. Malita (2011) also found posts of unrelated content in the FB group. Some prospective teachers were observed using the Facebook group created for the CSP course to make announcements regarding other courses they were taking. This is an indicator that the prospective teachers truly embrace the active group. Furthermore, the presentation of the products the prospective teachers developed through the social responsibility projects they implemented in groups, which drew acclaim from their peers and the instructor, certainly contributed to the development of group cohesion in the online learning environment, followed by social presence.

The prospective teachers were observed making frequent use of the 'like' feature within the FB group. Hayes, Carr, and Wohn (2016) label the one-click tools on social media sites (such as Like on Facebook, Favorites on Twitter, or +1 on Google+) with the term Paralinguistic Digital Affordances (PDAs), and the authors investigated how both senders and recipients interpret these tools. They found that some undergraduate students think that 'likes' on FB in particular are rather automatic reactions serving no particular purpose, that the content is mostly irrelevant, and that sending or receiving a 'like' does not mean anything. Further, Hayes et al. (2016) found that some users in the research group made use of the PDAs without first checking the contents of the share. Deng and Tavares (2013) note, however, that Facebook's 'like' feature increases the motivation and self-confidence of the poster, and improves the online presence of group members. Hayes et al. (2016), in turn, argue that PDAs serve both significant communication and simple utilitarian purposes; that is, they serve to facilitate communication among interpersonal social networks, provide means of archiving specific pieces, and enable access to information. The same study argues that the use and interpretation of PDAs are shaped by intentional and reactionary motives. It is evident that the Like symbol on FB is a tool that serves no specific purpose for some, and an intentional functional means for others. As no specific data on this matter was gathered in the present study, it is not easy to comment on the intentions of the participants with regard to that symbol. The prospective tachers may have used the FB Like symbol to indicate approval of others' expressed views, to voice appreciation for a piece of information or to note its usefulness, or simply to attempt to express the participants' presence in the group.

It is noteworthy that certain shares within the FB group led the prospective teachers to be more inclined to like and comment on the shares of other individuals in their respective close circles. The researcher's personal knowledge of the students, in addition to her position as the course instructor, allowed her to recognize this. According to Deng and Tavares (2013), in online communities, students are more likely to take part in community activities when they are better informed about the online presence of fellow students. Lu and Curwood (2015) also observed students' expectations for favorable reception from fellow group members. The prospective teachers' tendencies to support their close friends throughout the process implemented over the FB group suggests that this process had a positive impact on social presence.

Hung and Yuen (2010) note that the use of SNSs for higher education can contribute to the creation of a positive learning community. Indeed, shares with fun content observed, on occasion, in the FB group, as well as correspondence between members, arguably contributed to the development of a positive group learning environment. Imlavi and Gregg (2014) found that when an instructor employs appropriate humor within social network groups that are a part of a course, students' engagement improves. The present study did not entail planned use of humor on the part of the instructor, but humor that originated with the instructor was occasionally a natural part of the discussions. Further, the prospective teachers used humor within the FB group more frequently than the instructor, and they did so in order to raise awareness of social problems; humor was rarely used without any specific purpose. It is well-known that humor is a crucial element that serves to reinforce social presence (Lowenthal & Dunlap, 2014). Therefore, such interaction through the group could have played a positive role in furthering social presence. However, as is the case with real life, not being acquainted with others and feeling foreign to a new environment can cause stress and anxiety for people using online learning platforms (Ozturk, 2009). Some prospective teachers hesitated to express their views within the FB group and adopted a passive stance, as the crowded group included the instructor and unfamiliar members. Pempek et al. (2009) found that university students preferred online lurking to posting content on FB, while Manago et al. (2012) describe FB as a tool through which individuals express themselves, while friends, close or not, become the audience. It is evident that on FB, individuals may opt to become 'active exhibitors' or 'passive observers.' A study carried out with the prospective teachers led to the categorization of the participants' identities into six distinct groups with reference to their comments and posts in the FB group: sociable, supportive, open, helpful, reliant, and hidden (Lu & Curwood, 2015). The participants in the 'hidden' group, in this context, very rarely – or never, in

some cases – shared content to the FB group. Acting as passive observers lurking in the group, these participants referred to their feelings of anger or shyness to explain their behavior.

According to Hung and Yuen (2010), students' characters play a role when using social networks for education. Manca and Ranieri (2013) note that even though FB makes pedagogical processes simpler, there are many obstacles coming from the institutions, teachers, students, and the culture itself that prevent its effective use as an educational media. In this study, the prospective teachers who had trouble expressing themselves in the FB group owed perhaps some of these difficulties to the factors related to the students, teachers, and the culture. Moreover, within the framework of the study, it was noted that some prospective teachers staying in dormitories in particular experienced occasional problems accessing the Internet. According to Khan et al. (2014), Internet access issues act as a negative variable on students' use of social networks. Therefore 'hardware infrastructure' can be noted among the elements to shape the FB's pedagogical use, alongside the factors of institution, teacher, student, and culture.

In conclusion, the present study contributes to the literature, as it examines a course on community service projects, which was implemented outside the school through a social networking environment. Furthermore, the present study can possibly contribute to the literature because it sheds light on a case involving prospective teachers, where the teaching process was carried out through a FB group with the application of the CoI framework.

5. Limitations and implications

The high number of participants in the FB group created for the CSP course made the research process somewhat challenging. The author of the study found that while such an arrangement was initially considered a means to enrich the research, it was ultimately considered to be detrimental to the teaching process. The prospective teachers' focus on quantity rather than quality in terms of their shares on FB presented yet another limitation. The high number of FB group notifications led, on occasion, to a decline in the level of motivation the prospective teachers had toward the group. Taking all of these issues into account, one can argue that the present study can offer certain insights into making efficient use of social networks, for instructors who intend to utilize Facebook and other social networks for educational purposes.

Concerned that any intervention could inhibit the flow of data, the researcher did not intervene in sharing unless shared posts disturbed other participants. That the researcher also acted as the instructor may have been problematic in this context, yet. The assumption of the instructor role on part of the researcher brought about certain advantages that enabled a more comfortable perspective over the research process. That feature of the study led to major inferences that may help other researchers who will serve as both researcher and instructor when carrying out similar studies regarding the educational use of social networks. Furthermore, the education process implemented via the FB group, in conjunction with the CoI framework, led to some observations that could be of use to researchers investigating what to do to achieve social, cognitive and teaching presence for effective learning among online learning communities created on social networks.

6. Suggestions

The study is arguably rich in terms of the suggestions it could support. These include the following:

Teachers and prospective teachers in various disciplines should be trained regarding the potential contributions of SNSs in education. However, to be able to use SNSs effectively in formal education contexts, the scope of the course and the characteristics of the social network should be, above all, congruent.

Educational practices to be implemented over SNSs should be supported with visual, audio, and textual elements and documents. However, the instructor's guidance is essential to ensure that such documents and the SNS are used effectively for educational purposes.

Willingness and availability of the students should be taken into account when designing such educational practices. The high number of users in the FB group to be created for teaching purposes can also be effective in terms of increasing students' levels of motivation and enabling students to express themselves more comfortably. Posts on SNSs should be checked with reference to the characteristics of the learning environment, and certain restrictions should be in place to prevent unrelated shares.

Students taking part in the process should be analyzed in order to categorize them as either 'passive observers' or 'active participants' in the SNS group. The impact of such preferences over the teaching process is also worth pursuing further. The students' attitudes regarding the use of SNSs for educational purposes, with specific reference to the means used to ensure social presence for groups of students who prefer to be 'passive observers' or 'active exhibitors' on SNSs, can be addressed in future research, particularly in connection with the students' learning styles and self-efficacy.

Finally, given the recent increase in the use of social networks for educational purposes, and the need to establish robust theoretical foundations so that studies can be performed in this field, an investigation regarding how the CoI framework could be used over FB with a view toward achieving effective learning should be considered in future study.

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