Can we use Facebook groups to establish social presence in online courses?

Serkan Izmirli[*], Department of Computer Education and Instructional Technology, Faculty of Education, Canakkale Onsekiz Mart University, Canakkale, Turkey

Abstract

In this research, the potential of Facebook groups used in an online course in order to establish social presence was examined. Qualitative research methodology was used in this study. The participants of the study were 12 senior undergraduate students taking the School Experience course online over a period of 12 weeks. A Facebook group where announcements and deep discussions were made and files were shared was used. Facebook group posts as document data; and student interviews as interview data were collected. According to the results, it was found that Facebook groups established social presence. Social presence involves three categories; affective expression, open communication and group cohesion. Paralanguage, emotion, humor and self-disclosure emerged as indicators in the affective expression category. Acknowledgement, agreement, invitation and continuing a thread were found as indicators in the open communication category. Greetings and salutations, vocatives, group reference, social sharing and collaboration were found as indicators in the group cohesion category. A similar study can be conducted by collecting quantitative data from a large number of participants using the social presence scale. Other social networks' potentials to establish social presence can be examined. Since Facebook groups establish social presence, they can be used to support online or face-to-face courses.

Keywords: community of inquiry; Facebook; Facebook group; online course; social presence

*ADDRESS FOR CORRESPONDENCE: **Serkan Izmirli**[*]**,** Department of Computer Education and Instructional Technology,Faculty of Education, Canakkale Onsekiz Mart University, Canakkale, Turkey
E-mail address: sizmirli@gmail.com

1. Introduction

Social presence is the ability of participants to project their personal characteristics as "real people" and the degree to which participants feel emotionally connected to each other in an online community (Garrison, Anderson & Archer, 2000; Swan, Garrison & Richardson, 2009). Social presence has a significant role in the effectiveness of e-learning (Johnson, Hornik & Salas, 2008) and has a direct effect on the development of collaboration and community in an online course (Swan et al., 2009). It can be said that establishing social presence is necessary in the e-learning environments. There is a considerable amount of studies related to establishing social presence (Swan et al., 2009). However, there is a lack of studies investigating social networks in establishing social presence (Lowenthal & Mulder, 2017). It is useful to examine Facebook, which is considerably successful in building an online community (DeSchryver, Mishra, Koehler & Francis, 2009). Therefore, in this research, Facebook's potential to establish social presence was examined.

1.1. Facebook in education

Social network sites enable individuals to present themselves, to show their social networks and to communicate with others (Ellison, Steinfield & Lampe, 2007). One of the social network sites is Facebook. The mission of Facebook, a platform established in 2004, is to give people the power to build a community and gather the world. According to the statistics from 30 June 2017, the number of monthly active Facebook users passed 2 billion (Facebook, 2017). When the number of Facebook users is considered, Facebook's educational potential comes to mind.

The percentage of undergraduate students using Facebook is estimated as 78.8% to 94% (Ellison et al., 2007; Hargittai, 2007; Pempek, Yermolayeva & Calvert, 2009). While Ellison et al. (2007) found that undergraduate students spend an average of 10-30 minutes per day on Facebook; Pempek et al. (2009) found an average of 30 minutes of Facebook experience per day. It can be inferred that Facebook use is a part of undergraduate students' daily routines.

Social networks have a strong educational potential (Pempek et al., 2009; Wang, Scown, Urquhart & Hardman, 2014). Undergraduate students frequently write about and discuss university-related issues such as courses, seminars and library visits on Facebook (Selwyn, 2009). For this reason, universities may benefit from new methods such as social networks and use these methods for academic purposes (Pempek et al., 2009). The online social interaction provided by Facebook supports relationships and enables people to stay in touch. It may therefore be noted that Facebook provides an easy and accessible way for learners to make social contact with others (Ellison et al., 2007; Pempek et al., 2009). However, the fact that learners are comfortable with communicating over social networks does not mean that these networks are designed for educational purposes (Lowenthal & Mulder, 2017). Therefore, educators/instructional designers should be careful when using Facebook for educational purposes. In order to overcome Facebook's possible limitations, Wang et al. (2014) proposed a set of guidelines, such as creating a clear purpose in relation to Facebook use in higher education and specifying the extent of the collaboration. They stated that these guidelines would be useful for enhancing student experience and maximizing educational gain.

Facebook users can create and join virtual groups referred to as Facebook groups according to their common interests (Ellison et al., 2007; Pempek et al., 2009). In online courses, Facebook groups can be used as an area, where classroom announcements and materials are shared and discussions are held. It can be said that since most educators and students are online 24/7 thanks to their smartphones, group postings can be seen instantly. Thus, it can be inferred that the educators and students are up to date on the subjects related to the course. With these features, it can be said that Facebook groups have the potential to create social presence. Similarly DeSchryver, Mishra, Koehler, & Francis, (2009) expressed that Facebook has the ability to build a community and it facilitates social presence.

1.2. Social presence

Social presence is one of the dimensions of the Community of Inquiry Model. According to the Community of Inquiry Model, learning takes place in the community through the interaction of the "cognitive presence", "social presence", and "teaching presence" dimensions. Social presence is the ability of the participants to reflect their personal characteristics in the community. Thus, the participants present themselves as "real people" to other participants in the community (Garrison et al., 2000). According to Short, Williams and Christie (1976), social presence is "the degree of salience of the other person in the interaction and the consequent salience of interpersonal relationships." Tu and McIsaac (2002) defined social presence as the degree of reaction, perception, and emotion to other messages in the computer environment.

The categories of social presence are affective expression, open communication and group cohesion (Arbaugh et al., 2008; Garrison et al., 2000). The indicators of affective expression are paralanguage (e.g. emoticons, repetitive/exaggerated punctuation, conspicuous capitalization), emotion (using words to describe feelings – sadness, hate, love etc.), value (expressing personal values, attitudes and beliefs), humor (teasing, cajoling, irony, understatements, sarcasm), self-disclosure (sharing personal information, expressing vulnerability). The indicators of open communication are acknowledgement (quoting from others' messages), agreement (expressing agreement or disagreement), approval (expressing approval/appreciation, complimenting, and encouragement), invitation (asking questions, inviting responses), personal advice, continuing a thread. The indicators of group cohesion are greetings and salutations, vocatives (addressing participants by name), group reference (addressing the group as "we" "our" or "us"), social sharing (sharing information unrelated to the course), self-reflection (reflection on the course itself) (Rourke, Anderson, Garrison & Archer, 1999; Swan, 2003). Educators and instructional designers should provide these indicators in order to establish social presence.

Learners' perceptions of social presence positively affect their learning satisfaction in an online course (Akyol & Garrison, 2008; Hostetter & Busch, 2006; Johnson et al., 2008; Swan & Shih, 2005). Similarly, social presence strongly predicts learner satisfaction (Gunawardena & Zittle, 1997). Besides, learners having high social presence perceptions also have high learning perceptions (Richardson & Swan, 2003; Swan & Shih, 2005). If social presence is low, social learning does not occur (Tu, 2000). A high level of social presence with high-level participation is necessary for the development of higher-order thinking and collaborative work (Garrison et al., 2000). However, if there is too much social presence, which is higher than the optimum level, learning may be affected in a negative manner (Rourke et al., 1999). Therefore instructional designers should be careful while designing online learning environments. Richardson and Swan (2003) expressed that educators should consider the fact that social presence may affect students' satisfaction, motivation and learning. Johnson et al. (2008) stated that models related to e-learning effectiveness should take into account social presence.

There is a positive relationship between social presence and online interaction (Swan & Shih, 2005). Social presence and a sense of community emerge through ongoing communication and interaction (Johnson et al., 2008). Conversely, social presence is necessary in order to develop online social interaction (Tu, 2000; Tu & McIsaac, 2002).

As stated above, social presence is very important in online learning since it positively affects student satisfaction, motivation and learning and develops online interaction. Therefore, online classes can be designed to create social presence perception in students similar to face-to-face classes (Hostetter & Busch, 2006). In other words, online courses have the potential to create social presence that is created in face-to-face courses. In this context, online course educators and instructional designers should use technologies that facilitate building social presence (Johnson et al., 2008; Richardson & Swan, 2003). For instance, before integrating new technologies in online teaching, course educators and instructional designers should consider how these innovations can support the development of social presence (Shea & Bidjerano, 2009). Determining how social presence will be created in online environments can help instructional designers develop more interactive and successful online courses (Tu & McIsaac, 2002). Facebook may help to create social presence.

1.3. Facebook and social presence

Social presence is a mediating variable between teaching presence and cognitive presence. It provides an educational context (Garrison, Cleveland-Innes & Fung, 2010). Therefore, the educational context is important in order to establish social presence. Facebook may provide an educational context in order to establish social presence (DeSchryver et al., 2009). Lowenthal and Mulder (2017) stated that educators try to use Facebook with the intention of creating social presence.

DeSchryver et al. (2009) examined the effect of Facebook group discussions when compared to built-in Moodle forums for an online course on the perception of social presence. In this experimental study, one group used built-in Moodle forums for online discussions while the other group used a Facebook group discussion board. Richardson and Swan's (2003) survey was adapted in order to examine students' perceptions of social presence. According to the results, the discussion environment (Moodle vs. Facebook) did not have a significant effect on social presence. However, researchers expected that students in the Facebook group had higher social presence scores than students in the Moodle forum. They discussed their study's limitations and noted that Facebook might still be promising for online learning. In another study conducted by Cheung, Chiu and Lee (2011), the factors associated to the reason why students use Facebook were determined. The results indicated that social presence had the strongest impact on Facebook usage. Hence, it can be said that Facebook as a medium provides an opportunity for students to have social presence.

In most studies (e.g. Garrison et al., 2000; Swan, 2003; Swan & Shih, 2005; Tu & McIsaac, 2002) examining social presence, online synchronous/asynchronous discussions in online courses were used to establish social presence (Swan et al., 2009). Further research related to social presence is needed in different online course contexts (e.g. different groups and subject areas) (Swan, 2003; Swan et al., 2009; Tu & McIsaac, 2002). Apart from online discussion boards, social networks (e.g. Facebook) have the potential to establish social presence. Lowenthal and Mulder (2017) stated that further research examining the power of social networks to establish social presence is definitely needed. Similarly, DeSchryver et al. (2009) expressed that examining social presence on Facebook is worthy of further study. In the literature, there are limited studies examining the potential of Facebook to establish social presence (e.g. DeSchryver et al., 2009; Cheung et al., 2011). In this research, the potential of Facebook groups used in an online course in order to establish social presence was examined. It is expected that this research will serve as a contribution to instructional designers, educators and researchers.

2. Method

2.1. Context and participants

In this research, the potential of Facebook groups in order to establish social presence was examined. Qualitative research methodology was used in this study. The participants of the study were 12 senior undergraduate students from the department of Computer Education and Instructional Technology (CEIT) at the Canakkale Onsekiz Mart University in Turkey. Seven of them were female and five of them were male. Their age ranged from 21 to 23. Their Facebook experience ranged from four to ten years. Arbaugh (2004) stated that novice learners may hesitate to interact with others in online courses since they are new in this environment. Tu (2000) argued that computer literacy skills have a significant influence on social presence. Therefore, novice participants and participants having low/no computer literacy skills may negatively affect the results of a research examining social presence in a specific online environment. In this study, since participants had online learning experience and technological knowledge, this study does not have such limitation.

In the 2014-2015 fall term, 12 preservice teachers took the School Experience course online over the course of 12 weeks. The School Experience course is a five-hour course including a one-hour theoretical part and a four-hour practical part. In the practical part, preservice teachers go to schools (high or primary schools) every week in order to observe four-hour lessons and write reports. In

schools, there is a supervising teacher, who is responsible for the preservice teachers. In the theoretical part, preservice teachers discuss their experiences and share their problems with the supervising faculty member. This one-hour course was conducted online. The faculty member used both an online learning management system (Moodle) and a social networking site (Facebook) for the course. The implementation process for the course was as follows. The supervising faculty member and preservice teachers were registered on Moodle. The supervising faculty member collected homework from the preservice teachers via Moodle every week. Besides, every week, a one-hour course was conducted via a synchronous virtual class, namely the BigBlueButton, which was integrated into Moodle. In this synchronous virtual class, students shared their experiences and received feedback from the supervising faculty member. In addition to Moodle, the supervising faculty member created a closed Facebook group. All students, as well as the faculty member have Facebook accounts. The faculty member was the administrator of this group. She added preservice teachers to the Facebook group. In the Facebook group, announcements and deep discussions were organized and files were shared. The faculty member and the students stayed in touch thanks to the Facebook group. The Facebook group was used actively by the preservice teachers and faculty member. 217 messages (96 main postings and 121 comments) were posted in the Facebook group.

2.2. Data collection

Rourke et al. (1999) stated that further studies using different instruments are needed to triangulate the perception of social presence. In qualitative research, there are four basic data collection types: observations, interviews, documents and audio-visual materials (Creswell, 1994). In this research, data was collected from documents and interviews. Facebook group posts were document data and student interviews were interview data.

A total of 12 students and the faculty member posted in the Facebook group for 12 weeks. In addition to document data, semi-structured interviews were held with all 12 students who took the course at the end of the semester. To find evidence for Facebook's potential to establish social presence, in the interview form, questions were about the dimensions of the social presence, namely affective expression, open communication and group cohesion (Garrison et al., 2000). The interview form has three main and six sub-questions. The draft interview form was examined by two experts who have expertise in qualitative research and online learning. After receiving experts' comments, the interview form was finalized. The questions tried to find evidence for these dimensions. One sample question was: "How did you express yourself affectively while communicating and interacting with other students and the faculty member in the Facebook group?" Students had been interviewed individually. Audio was recorded during the interview.

2.3. Data analysis

For the document analysis, posts in the Facebook group were analyzed. For the interview data analysis, the audio was transcribed and the transcriptions were analyzed. The Nvivo program was used to analyze both data. Because we had the main themes, we used a descriptive analysis technique to analyze the data. The main themes were the dimensions of the social presence, namely affective expression, open communication and group cohesion. Two raters coded transcripts and posts independently at first. Then, they met to determine whether there were any disagreements. After that they discussed and reached an agreement on these themes. The findings were supported with direct quotations. Code names were used for the students.

2.4. Validity and reliability

To have validity and reliability in this qualitative research, multiple data collection, member checking, external audit, describing the context and using audio recording techniques were used (Fraenkel, Wallen & Hyun, 2012). Data was collected on the basis of documents and interviews. This means that a multiple data collection technique, which represents a form of triangulation was used.

After the data was analyzed, some participants of the research were asked to review the accuracy of the report. An expert was asked to review the methods and interpretations of the study. The research context was described in detail. In interviews, audio was recorded.

3. Findings and Discussion

Affective expression, open communication and group cohesion, which were the dimensions of social presence, represented the main themes. The researcher tried to find evidence for social presence in the Facebook group. Some sub-themes, which emerged from the Facebook group analyses, were presented in Table 1.

Table 1. Themes and sub-themes regarding social presence from Facebook group posts

Themes and sub-themes	Description	Reference
1. Affective expression		
1.1. Paralanguage	Using emoticons, repetitious/exaggerated punctuation or spelling	Rourke et al., 1999; Swan, 2003
1.2. Emotion	Using words to describe feelings (sadness, hate, love etc.)	Rourke et al., 1999; Swan, 2003
1.3. Humor	Use of humor (teasing, sarcasm, cajoling, irony, understatements etc.)	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
1.4. Self-disclosure	Sharing personal information, express vulnerability	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
2. Open communication		
2.1. Acknowledgement	Referring to contents of others' messages	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
2.2. Agreement	Expressing agreement or disagreement	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
2.3. Invitation	Asking questions or inviting response	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
2.4. Continuing a thread	Using comments on Facebook	Rourke et al., 1999
3. Group cohesion		
3.1. Greetings and salutations	Greetings, salutations	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
3.2. Vocatives	Addressing participants by name	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
3.3. Group reference	Addressing the group as "we", "our" or "us"	Rourke et al., 1999; Richardson et al., 2015; Swan, 2003
3.4. Social sharing	Sharing information unrelated to the course	Swan, 2003

3.1. Affective expression

In this research, paralanguage, emotion, humor and self-disclosure were found as the indicators of affective expression. Their descriptions were given in Table 1. Creating social presence in face-to-face environments is represented by visual cues (Garrison et al., 2000). In digital communication, visual cues referred to as emoticons were developed to show an emotional state. Emoticons compensate for the lack of traditional non-verbal components (Krohn, 2004; Read, 2005). Similarly, in this study, emoticons were used to show the emotional state on Facebook, which is an electronic medium. When Facebook group posts were examined, it was seen that students used paralanguage (Rourke et al., 1999; Swan, 2003) to express their feelings. Fidan used emoticons: *"Ok professor* 😃*"* (Facebook Group, 10.16.2014). Ufuk used exaggerated spelling to show his laugh: *"Ahahahaha"* (Facebook Group, 10.08.2014). Some students showed their emotions (Rourke et al., 1999; Swan, 2003) by using words. Cahit showed his excitement by writing *"When I see this Facebook notice, my heart rate accelerated. I forgot that* 😐 😃*"* (Facebook Group, 12.06.2014). Some students used humor (Rourke et al., 1999; Richardson et al., 2015; Swan, 2003) to express their affective situation. Gizem wrote that: *"Now I feel like I am an MIT (National Intelligence Organization of Turkey) agent* 😃*. I am*

observing the teacher at school secretly and taking notes 😊*"* (Facebook Group, 10.08.2014). Some students shared their personal information, which constitutes an act of self-disclosure (Rourke et al., 1999; Richardson et al., 2015; Swan, 2003). Ufuk wrote that: *"My brain is burned out because of solving too many questions for hours :D"* (Facebook Group, 11.05.2014).

Some supportive data for affective expression was obtained from interviews. Yeliz said that *"I use Facebook for a long time. I know the participants of the group. They are my school friends. Because of that I feel comfortable…"* (Interview, 09:59). This is in line with the community of inquiry (coi) survey item, which is *"Getting to know other course participants gave me a sense of belonging in the course"* (Arbaugh et al., 2008). Cahit said that *"Our communication and interaction in Facebook group was super"* and Ufuk said that *"Emoticons help me express my feelings conveniently... Sometimes, a smile may change everything."* Those are in line with the coi survey item: *"Online or web-based communication is an excellent medium for social interaction."* In this study, it was found that the Facebook group facilitated affective expression.

3.2. Open communication

In this study, acknowledgement, agreement, invitation and continuing a thread were found as the indicators of open communication. Their descriptions were given in Table 1. Acknowledgement meaning quoting from others' messages is one of the indicators of open communication (Rourke et al., 1999; Richardson et al., 2015; Swan, 2003). Ali stated that *"I will do exactly what he did, my professor"* (Facebook Group, 10.10.2014). Rourke et al. (1999), Richardson et al. (2015) and Swan (2003) found that agreement is an indicator of open communication. It can be said that in the Facebook group, the "like" feature of Facebook showed that there were agreements. 67 out of 96 main postings were liked by the participants. In addition, most of the comments were liked too. Invitations, which refer to asking questions or inviting responses, are another indicator of open communication (Rourke et al., 1999; Richardson et al., 2015; Swan, 2003). Cahit asked a question to the professor. This question was *"Have you given feedback, my professor?"* (Facebook Group, 10.27.2014). Discussions and question-and-answer activities support the creation of social presence (Richardson & Swan, 2003). Rourke et al. (1999) indicated that "continuing a thread" is an indicator of social presence. Facebook makes it possible to continue a thread. 25 out of 96 main postings have comments and these 25 main postings have a total of 121 comments. In this research, since some of the Facebook postings have comments, it can be said that some students continued the threads.

Some supportive data for open communication was obtained from interviews. Esin indicated that *"I feel comfortable on Facebook as it is so warm and intimate. I make my comments comfortably"* (Interview, 07:38). This is similar with the coi survey item which is *"I felt comfortable conversing through the online medium"* (Arbaugh et al., 2008). Selim stated that *"If there is a question asked, I share an answer. If I agree with my friends comments, I like it"* (Interview, 13:32). It can be said that Selim felt comfortable participating in the group. This involves similarity with the coi survey item: *"I felt comfortable participating in the course discussions."* Gizem said that *"I can communicate with my friends and professor on Facebook in a casual way as I normally communicate in daily life"* (Interview, 06:22). This is in line with the coi survey item, namely *"I felt comfortable interacting with other course participants."* In this study, it was found that the Facebook group facilitated open communication

3.3. Group cohesion

In this study, it was found that greetings and salutations, vocatives, group reference, social sharing and collaboration were the indicators of open communication in the Facebook group. Their descriptions were given in Table 1. When learners feel as part of a group rather than as an individual, critical thinking becomes easier. For this reason, it is desirable to have activities that create and sustain group feelings in online learning environments (Garrison et al., 2000). Rourke et al. (1999), Richardson et al. (2015), and Swan (2003) found that greetings and salutations are an indicator of group cohesion. Gizem greeted her friends and professor by writing *"Good evening my friends and*

professor 😊 *"* (Facebook Group, 10.16.2014). In this study, students used vocatives (Rourke et al., 1999; Richardson et al., 2015; Swan, 2003). Ali wrote : *"* 😊 *aa who ridiculed you, my friend Ufuk* 😊 *"* (Facebook Group, 16.10.2014). Group reference is another indicator of group cohesion (Rourke et al., 1999; Richardson et al., 2015; Swan, 2003). Filiz addressed the group as "we": *"We talked to our teacher and we will not go to school…"* (Facebook Group, 10.04.2014). Some students shared information unrelated to the course, which is called social sharing (Swan, 2003). Gizem wrote: *"May I ask a question, my professor? For the Distance Education course, grade calculation: mid-term exam (20%) + homework (20%) + final exam (60%)?"* (Facebook Group, 11.12.2014). She shared information about a different course.

Some supportive data for group cohesion was obtained from the interviews. Esin indicated that *"One of my friends was so comfortable. He wrote his opinions without any censorship. For instance, he wrote a comment: 'I did not like what you wrote since it was unpleasant'. He criticized everyone and once he wrote that: 'I know it is very hard for you to hear that but that is for your own good'"* (Interview, 30:36). This is similar with the coi survey item: *"I felt comfortable disagreeing with other course participants while still maintaining a sense of trust"* (Arbaugh et al., 2008). Cahit wrote: *"My friends asked me what to do in the homework. We consulted each other and we uploaded our homework"* (Interview, 12:54). This is in line with the coi survey item: *"I felt that my point of view was acknowledged by other course participants."* In this study, it was found that the Facebook group established group cohesion.

4. Conclusion and Suggestions

In this research, the potential of Facebook groups to establish social presence was examined. According to the results, it was found that Facebook groups established social presence. Social presence entails three categories: Affective expression, open communication and group cohesion. Comprehensive evidence was found for all categories. Some indicators such as paralanguage, emotion, humor and self-disclosure emerged in the affective expression category. Acknowledgement, agreement, invitation and continuing a thread were found as the indicators of open communication. Some indicators such as greetings and salutations, vocatives, group reference, social sharing and collaboration were found as the indicators of group cohesion.

This study has some limitations. This qualitative research was conducted with 12 pre-service teachers who took an online course. Therefore, it can be said that however the results of the research do not carry generalization concerns; they provide important implications for researchers and practitioners. The results of the research should be evaluated together with its context. The participants of the study were undergraduate students studying in the formal education program. A similar research can be conducted with different participants (e.g. high school students). Tu and McIsaac (2002) expressed that if participants know each other, social presence may be positively affected. In this research, since participants took many face-to-face courses together, they knew each other. This may have positively affected the creation of social presence. For this reason, in order to address this concern, a similar research can also be conducted in courses in distance learning programs. However, Tu and McIsaac (2002) suggest that a "getting to know each other" session should be held at the beginning of the semester in order to facilitate the creation of social presence in the courses in distance learning programs. The research data was obtained from the Facebook group posts and interviews. A similar study can be conducted by collecting quantitative data from a large number of participants using the social presence scale (e.g. Kang, Choi & Park, 2007; Kilic Cakmak, Cebi & Kan, 2014; Kim, 2011). If the quantitative research studies are to be carried out, the effect of social presence established on Facebook on success, satisfaction and motivation can be examined. Other social networks' potentials to establish social presence can be examined. Since Facebook groups establish social presence, they can be used to support online or face-to-face courses.

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