Interpersonal and Group Interactions Using Educational Blogs

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Abstract

Using educational blogs promotes the improvement of online learning by creating a peer dialogue in the form of a reader response or a question-and-answer sequence. The present study explores interpersonal and group interactions using blogs. The findings show that, as predicted by the theory of electronic propinquity (TEP), the feeling of nearness transmitted by students via blog posts positively related to students' interpersonal online interactions. According to the hypothesis, private authorship in personal blogs affected group interaction patterns in comparison to multi-authored wikis. While educational blogs promoted communication among all course students, wiki interactions were affected by student offline former acquaintance and social contact. The present study findings suggest some recommendations concerning the use of educational blogs in order to encourage student interactivity: (1) projecting nearness to audience, (2) sharing thoughts, work experiences and feelings related to learning or personal experiences rather than providing information, (3) calling for feedback, and (4) responding to peers' comments.

Keywords: interpersonal and group online interaction, comments, educational blog, wiki, immediacy, electronic propinquity, social presence.

Introduction

Online learning environments based on student-instructor and student-student interactions are widely used in higher education. Active online student interaction is a significant predictor of perceived learning (Rovai & Barnum, 2003), learning outcomes and student satisfaction (Brady, 2004). Interactivity is defined as "a process-related variable concerning responsiveness" (Rafaeli & Ariel, 2007, p. 84). Research indicates that the blogosphere is a powerful reflective learning space which offers the opportunity to interact with others and learn in a natural environment as part of everyday life (Ladyshewsky & Gardner, 2008; Ševelj, 2006). Interpersonal interaction patterns between authors and readers in educational blogs differ from those in the global blogosphere (Duarte et al., 2006) because educational blogs are less visible, written by ordinary people mainly for a relatively small audience of a specific network (Nardi, Schiano, & Gumbrecht, 2004).

Educational blogs are sometimes used as "online diaries" where students write about their own experiences or share their ideas related to course topics (Davi, Frydenberg & Gulati, 2007). This kind of educational blogging is both a student-centered and peer-focused activity (Chiddo,

2006; Glogoff, 2005) which maintains two kinds of **student interaction**: intra-personal dialogue as well as inter-personal interaction (Gorsky, Caspi, & Chajut, 2008). On the intra-personal level, blogging which allows thinking by writing (Nardi et al., 2004) can clarify thoughts or emotions (McKenzie, 2008), and be a beneficial activity contributing to personal and professional development (Felix, 2008). On the inter-personal level, communication with others is a prevalent motivation for adult blog writing (Miura & Yamashita, 2007). A peer dialogue via blogs is created by posting entries and receiving reader feedback, or in the form of a question-and-answer sequence (Huffaker, 2005; Kim, 2008). Questioning and challenging each other's thinking leads to deep, meaningful interactions and learning (Poling, 2005). Students enjoy reading their classmates' postings and having classmates comment on their own writing (Blackston, Spiri, & Naganuma, 2007). Comments are important for the bloggers' experience (Gumbrecht, 2004; Miura & Yamashita, 2007; Trevino, 2005). Positive feedback, either from peers or a teacher, increases student willingness to write in the educational blog (Levenberg & Gorsky, 2008; Pinkman, 2005).

Some theoretical approaches explain the effect of **nearness** on interpersonal interaction. Predating the Internet, Korzenny (1978) offered the theory of electronic propinquity (TEP), which is a general theory of mediated communication. *Electronic propinquity* is "electronic proximity, electronic nearness, or electronic presence" (Korzenny, 1978, p. 7) – "psychological feeling of nearness that communicators experience using different communication channels" (Walther & Bazarova, 2008, p. 624). Walther and Bazarova validated TEP in computer mediated communication and extended the theory for text-based interaction, in addition to face-to-face and voice- or video-conferencing communication. Original TEP predicted that mutual directionality of communication increases electronic propinquity, but this was not validated in Walther and Bazarova's study.

The concept of *immediacy* was defined by Mehrabian as "those communication behaviors that enhance closeness to and nonverbal interaction with another" (Mehrabian, 1969, p. 203). The positive impact of immediacy on learning process and outcomes has been widely tested in offline classroom (see Witt, Wheeless, & Allen, 2004). In an online text-based environment, *social presence* which is based on the concept of immediacy (Rourke, Anderson, Garrison, & Archer, 1999) was described as the ability of learners to project themselves socially and emotionally as real people in an online learning community (Garrison, 2007). However, this definition refers to actual social presence (i.e. a number of self-projection indicators), which may be different from the perceived level of social presence (Blau & Caspi, 2007) – the feeling of nearness. It was found that perceived social presence in online environments positively related to perceived learning (Caspi & Blau, 2008) and learner satisfaction (Kang, Kim, & Park, 2008).

To the best of our knowledge, no empirical testing of the relation between interactivity and the feeling of nearness in a blog environment has been conducted, but descriptions of different language use in different blog types might indicate the existence of such relations. The majority of blogs fall within the following two general types: informational blogs in the tradition of the newspaper column, and personal diaries that describe people's personal thoughts, day-to-day experiences and feelings (Chesher, 2005; Herring et al., 2005). Informational blogs use a more formal language, while personal diary language is more informal and transmits closeness to the audience (Herring & Paolillo, 2006).

A few studies explore **authorship** issues in asynchronous educational tools (see Lankshear & Knobel, 2006; Warschauer & Grimes, 2007). A personal blog is a private space, a "home" and a personal property of the individual student, who has control and ownership over the discourse

(Ducate & Lomicka, 2005; Hurlburt, 2008; Lamshed, Berry, & Armstrong, 2002). It was found that students who used a shared blog were less interested in blogging compared to students who used a personal blog (Kim, 2008). Authorship in personal blogs is strongly identified with the writer through his nickname in each blog entry and information in the profile section (Chesher, 2005), while wiki entries are collaborative and multi-authored (Warschauer & Grimes, 2007).

The purpose of this study was to explore interpersonal and group interactions using blogs. Specifically, this study investigated the relations between the feeling of nearness (immediacy / social presence / electronic propinquity) perceived via posts and inter-personal blogger-reader interactions in educational blogs. In addition, this study compared peer group interactions in educational blogs to wiki group interactions. Based on TEP prediction, we hypothesized that (1) the feeling of nearness would positively relate to interpersonal interactivity; (2) private authorship in personal blogs and multi-authored wikis would arouse different group interaction patterns.

Method
Participants
Participants were 25 graduate students (76% women) enrolled in the spring 2008 semester of a graduate course in the field of Educational Technology at the Open University of Israel. The participants' ages ranged from 27 to 53.

Instruments and Procedure
The participants studied in a blended learning environment including face-to-face meetings in two groups with two different instructors (there were no offline meetings with students of the other group), and online communication between course students which was moderated by both instructors. As a part of online learning activities with minimum involvement of moderators and without academic credit, the students wrote personal blogs using Google's Blogger[1] platform and group weekly summaries using a wiki environment.

The participants wrote 133 posts and 209 comments. Following Herring et al.'s (2005) observation, student post content was categorized as sharing (1) information, N=28, (2) thoughts, N=26, (3) work experiences, N=33, and (4) feelings related to learning and personal experiences, N=46.

Immediacy was measured as perceived post nearness versus distance - by checking if a post included (N=101, 75.9%) or excluded warmth and confidence expressions, humor, and self-disclosure. The present study examines <u>actual</u> (realization of) interactivity which is different from perceived or expected interactivity (Rafaeli & Ariel, 2007). Feedback promoting was measured by checking if a post included (N=32, 24%) or excluded phrases like: I'd love to know your opinion, What do you think? Is someone feeling like me? etc. Only peers' and bloggers' own comments were considered as an interpersonal interaction measure, since only a few students used other blog expressions of social relations (Furukawa et al., 2007; Marlow, 2004): the trackback function (citation hyperlinks) and a blogroll (a list of links to other blogs on the front page). While only 28% of global community blogs contain comments from readers (Mishne & Glance, 2006), all educational blogs in the present study received peer feedback. The relatively small number of comments found in this study (Range: 1-10, Median: 1, Mean: 1.57, SD: 1.94) was still significantly higher than the average of 0.3 comments per post in the entire

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[1] https://www.blogger.com/

blogosphere (Herring, Scheidt, Bonus, & Wright, 2004). Only 24 (18%) posts in the present study contained blogger's interaction with classmates by writing his or her own comments.

Group interactions using blogs were measured separately as the number of comments received from peers studying in the same and different offline group. Group interactions using wiki were measured as the number of students choosing partners from their own and from different offline group for shared weekly summary writing.

Results and Discussion

Table 1 shows means and SD of comments received per post in different content categories.

Table 1. Means and SD of comments received per post in different content categories

Post content type	Mean	SD
Information	0.25	0.70
Thoughts	2.50	2.40
Work experiences	1.70	1.69
Feelings	1.76	1.97

The analysis of student underlined interpersonal blog interactions showed a statistically significant effect of post content on the number of comments received, F(3,129)=7.47, $p<.001$. Subsequent tests showed that informational posts received a significantly smaller number of comments compared to posts which shared student thoughts, work experiences or feelings, and the effect sizes were large. Table 2 summarizes these results. Schmidt (2007) clamed that speaking in one's own personal voice and being open for dialogue rather than engaging in one-way communication are core elements readers expect from blog communication, either in personal online diaries or informational blogs. Kim's (2008) study recommends instructors and students to seek relevant information from other websites and share it on a blog. The present study findings indicate that students have difficulty in preserving a personal voice in information providing, thus informational posts mostly result in one-way communication.

Table 2. Comparisons of post content effect on number of comments: Post-hoc tests

Post content type comparisons	p	Effect size
Information – Thoughts	<.001	d=1.29
Information - Work experiences	<.01	d=1.09
Information – Feelings	<.001	d=.93

As hypothesized, immediacy affects the amount of interaction: the posts estimated as near (Mean: 1.48) received significantly more comments compared to posts perceived as distant (Mean: 0.63; t(131)= 3.8, $p<.001$). Posts which included feedback promoting (Mean: 2.25) received significantly more comments in comparison with posts that excluded interaction promoting (Mean: 1.36; t(131)= 2.31, $p<.05$). The blogger's own comments increased the number of peer comments received (Mean: 2.38) compared to posts without bloggers' own feedback (Mean: 1.03; t(131)= 4.29, $p<.001$). Since students were not limited to writing solely

about course issues, only 36 posts (27.1%) directly discussed course topics or learning activities. The analysis showed that the posts discussing course issues did not receive more comments compared to less relevant posts, $t(131)=.761$, $p>.4$. The frequency of posting in each blog may characterize the level of blogger's engagement (Duarte et al., 2006). In contrast with previous studies, which showed a correlation between a self-reported average weekly number of posts made and comments received in the entire blogosphere (Marlow, 2006), the interaction in this study was not affected by the actual posting frequency, or by a post length.

Statistically significant correlations were found between some independent variables of this study, suggesting that if peer interactions were important to students, they used different ways of promoting interactions and maintaining communication. Immediacy perceived by posts significantly correlated to post content type, Cramer's V=.567, $p<.001$: almost all posts which shared thoughts and feelings transmitted nearness to the audience (Figure 1).
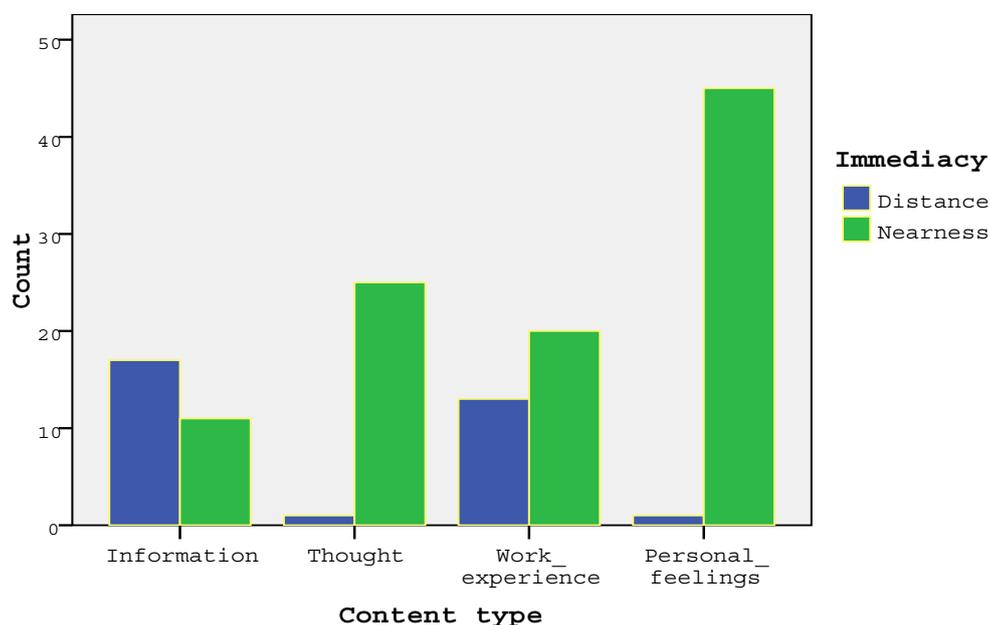

Figure 1: Immediacy in different post content types

In addition, Immediacy perceived by posts correlated with feedback promoting, Phi=.25, $p<.05$. Blogger's own comments significantly correlated with post content type, Cramer's V=.28, $p<.05$: almost all informational posts excluded the blogger's own feedback. Blogger's own comments also significantly correlated with feedback promoting, Phi=.24, $p<.01$: posts excluding peer feedback promoting also excluded the blogger's own feedback.

The comparison of group interactions using blogs and wiki showed the difference between these tools. Statistically significantly more students, $\chi^2(1)=10.7$, $p<.01$, chose to write wiki group weekly summaries with others known from face-to-face interaction (22), compared to students who chose editing a wiki summary with unknown students from the other offline group. However, group interaction in blogs was not related to offline groups: there was no statistically significant difference between receiving comments from the blogger's own group and from students who learn in a different offline group, $\chi^2(1)=0.14$, $p>.7$. As expressed by Cunningham (2005), developer of the first wiki platform, "the blogosphere is a community that might produce a work, whereas a wiki is a work that might produce a community". Blogs in the present study promoted the creation of an online learning community which included all course students, while interactions via wiki, similar to Blau and Caspi's (2008b) study, remained

affected by student offline communication. Certainly it is the people who make online learning happen, not the technology (Mejias, 2005), but it seems that a medium per se still affects emotional aspects of learning, such as students' interest, learning satisfaction and enjoyment of interaction with instructor or peers (Blau & Caspi, 2008a).

In summary, the results of this study indicated that both of the hypotheses proposed were supported. Corresponding to TEP prediction, the feeling of nearness transmitted by students via blog posts positively related to interpersonal student interactions. Private authorship in personal blogs affected group interaction patterns in comparison with multi-authored wikis. While educational blogs promote the creation of an online learning community which includes all course students, the interaction via wiki remains affected by student offline communication.

The study findings suggest some recommendations concerning the use of educational blogs on order to encourage student interactivity: (1) projecting nearness to audience, (2) sharing thoughts, work experiences and feelings related to learning or personal experiences rather than providing information, (3) calling for feedback, and (4) responding to peers' comments.

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