

THE ROLE OF INSTANT MESSAGING DURING PRACTICUM: LESSONS LEARNED FROM A CASE STUDY

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Abstract

The use of technological infrastructure in academic departments for teacher preparation can provide support for student teachers during practicum, since school placement can be a particularly intense and emotional experience. Using a Web 2.0 social network as a collaborative space, students were encouraged to share their experiences in order to establish a supportive learning environment. In this article, we present the results of a content analysis research based on electronic messages of the Instant Messaging (IM) mechanism. Content analysis revealed that synchronous communication via instant messaging served as a Query and Answer (Q&A), support and self-expression mechanism within a social context.

Introduction

Current research on teachers' preparation, as summarized by Zagami (2010), describes school placement during practicum as a stressful component of teachers' preparation program. Curriculum mainly focuses on methodology and less on preparing students to cope with real-life situations in classrooms and schools.

Practicum is a baseline for teachers' preparation, because during classroom placement students start to build their *self-perception* about the profession, mainly by associating theory and practice, reflecting on practice and gaining a better understanding of *what is to be a teacher* (Geijsel & Meijers, 2005; Korthagen & Vasalos, 2005; Carrington, Kervin, & Ferry, 2009).

Gold (1996) identified two broad concepts of support that students need during this phase, as they have to overcome issues like time management, teaching preparation, personal beliefs and expectations: (a) *instructional support*, i.e., class administration, student motivation, instructional design, diversities among students, etc. and (b) *psychological support*, i.e., emotional support, positive feedback, stress handling, increase self-esteem and self-efficacy, etc.

Moreover, it has been acknowledged that teachers' preparation programs must be adopted in order to cope with the new demanding requirements of 21st century skills (AACTE, & P21, 2010), whereas future teachers must be able to act in a student-centric, personalized, flexible and ICT-oriented educational environment (Zygouris-Coe, 2013).

Scholars and policy makers have advocated for and argued about the potential benefits of using and embedding ICT within pre-service teachers' preparation programs (Russell, Bebell, O'Dwyer, & O'Conner, 2003; Tsoulis, Tsolakidis, & Vratsalis 2012). Academic institutions are already pacing the latest integration phase where pervasive technologies enable *intra/inter/trans-institutional* social arrangements, supporting one of the main missions of pre-service institutions, i.e., to create a social fabric for teacher education and later professional practice based on relationships (Gomez, Sherin, Griesdom, & Fin, 2008).

In this broad context, recent studies have examined the use of *computer mediated communication* (CMC) technologies in order to provide instructional and emotional support for student teachers during practicum, where various asynchronous and synchronous technologies have been utilized.

Among other researchers, Chu, Chan, & Tiwari (2012) reported that blogs enhance professional learning of student teachers during placement; English and Howell (2011) used Facebook as a communication means, associating the social, cultural and digital capital of students. Reich, Levinson, & Johnston (2011) used the Ning platform to facilitate an educational social network among students, and Cameron, Campbell, & Sheridan, (2011) used mobile phones among students during school placement and found that such an initiative requires structural changes of practicum settings. Davie and Berlach (2010) used wikis to facilitate collaboration among students placed in rural schools; Zagami (2010) used iPhones+Twitter in order to facilitate communication among students. Paulus and Scherff (2008) used asynchronous forums as peer support mechanism, and Rideout et al. (2007) used the Moodle Learning Management System (LMS) in order to maintain a virtual community and empower the sense of belonging in this community.

Results showed various positive outcomes in terms of using communities' formation on the Web in order to provide support to students during practicum but with some important limitations: (a) lack of a holistic approach between practicum, pedagogical and technological design, (b) focus only on one CMC tool and (c) small range of participants.

Taking into account these limitations, our exploratory case study followed a holistic approach utilizing a social network (S/N) environment in order to facilitate a community of practice between students, using various synchronous and asynchronous communication tools and integrating this initiative into the pedagogic/didactic design of the practicum (Kostas, Sofos, & Tsolakidis, 2013).

In this article, we focus mainly on synchronous communication via the instant messaging mechanism of the S/N environment and present results from a content analysis conducted over all messages exchanged between members of the community. In this way we could trace conversation patterns and themes over this communication channel throughout an entire semester.

Pedagogical and Technological Context

The concept of a holistic approach in this research refers to the design of a sound pedagogical and technological framework integrated into the practicum process.

Research settings for the *pedagogical* domain focus on student teachers' reflection on action (Schön 1983) and “emerging” professional identity in a social context, such as a community of practice (Wenger, 1998), and follow the evidence of educational affordance of Web 2.0 tools (Kostas et al., 2013).

An inquiry and reflective approach for the incorporation of new media in the educational process (Sofos, 2013) formulated a theoretical model with six dimensions (Figure 1), and served as the basis for the practicum of the lesson entitled “Design and Creation of Digital Content for Online Distance Learning” during the 7th academic semester in the Department of Education, University of the Aegean.

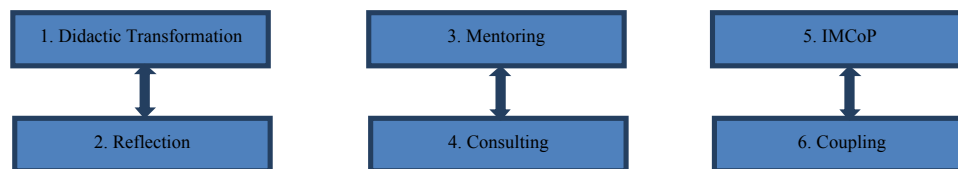


Figure 1. Basics of the holistic model for the reflective practicum.

Research settings for the *technological* domain focus on ICT as a facilitation means between a student teacher and his/her pedagogical aims and follow the concept of *communities of practice* as a social network and a non-formal learning and collaborative space among students.

It was set up as an electronic *Community of Teachers Practicum* (eCTP) (Kostas et al., 2013) in order to support and facilitate teaching practice by establishing a network of communicating peers among students, fostering reflection on action by sharing individuals' or collegial experiences, problems, personal stories from the classroom, peer assessment of didactic plans, perceptions about the profession, etc. Based on literature review, members of eCTP had access to a set of tools within a common technological platform, in contrast to communities mediated by a single technology (forum-oriented, blog-oriented, etc.), and also the community was organized as an inter-institutional educational network.

Those requirements led to the adoption of a Software-as-a-Service (SaaS, or *Cloud Services*) SaaS solution for the community's infrastructure. SaaS is a new computation paradigm with five basic characteristics: *on-demand self-service, broad network access, resource pooling, rapid elasticity and measured service* (Bora & Ahmed, 2013). So, SaaS Grou.ps (<http://grou.ps>) was chosen as the technological solution. It is a “a do-it-yourself” social networking platform that allows people to come together and form interactive communities around a shared interest or affiliation with built-in apps enabling

easy collaboration and communication with 12M+ members and 300K+ active groups, based on open source technologies.

Research Context

The process of students' online instant messaging analysis was part of a qualitative case study, which was the overall research design. According to Yin (2003) *case study* is a research strategy rather than a method, i.e., an empirical enquiry that investigates a contemporary phenomenon within its real-life context. In this context, rather than just investigating isolated variables that may impact CMC in the community, it was more appropriate to describe and interpret students' participation on synchronous communication as part of an educational phenomenon.

Although a qualitative case study design builds rather than tests theory (Merriam, 1988), researchers do not endeavor investigation without any kind of theoretical propositions to guide the study. Therefore relevant literature is used as theoretical background. Based on Paulus and Scherff's (2008) work on asynchronous CMC for students, this study focuses on synchronous communication via chat tools to explore patterns and themes on communication between student teachers during practicum.

Research design was reinforced by Groups' communication and collaboration tools, aligned with the pedagogical context, which allowed student teachers to actively participate in a set of *open* and *closed* activities guided by three main research issues:

- Reflective dialogue of student teachers while participating to eCTP.
- Student teachers' perceptions of professional identity during school placement.
- eCTP as a mean to facilitate and foster practicum.

Based on the literature review and the above research context, an exploratory single case study research was set up during practicum in the Primary Education Dept., University of Aegean, and case was defined as the support and facilitation of the practicum via a virtual Community of Practice (CoP).

Data Sources and Analysis

Study participants were a cohort of 165 student teachers (28 males and 137 females) placed in 16 different K-6 schools for internships, spanning over 13 weeks, organized into three distinct phases: (a) *Classroom Observation* (weeks: 2-4), (b) *Micro-Teachings* (weeks: 5-7) and (c) *Classroom Teachings* (weeks: 9-11).

These students were members of eCTP as well, having produced more than 4.500+ artifacts in the community, such as forum messages, blog posts, chat messages, files sharing (text, images, and video), private messaging, etc., throughout semester as part of the educational process.

Even though chat messages (IM) were not part of the original educational design, users exchanged a large amount of messages (800+) -- a fact that influenced us to include synchronous communication as part of our research sources (with forum and blog messages) (see Figure 2).

An average of 53 messages were posted per week and 4.6 messages per user (0.36 messages per user per week) for the duration of the course, where the most active week was 13 with a total of 333 messages, because even though the semester ended January 13th, communication continued till February.

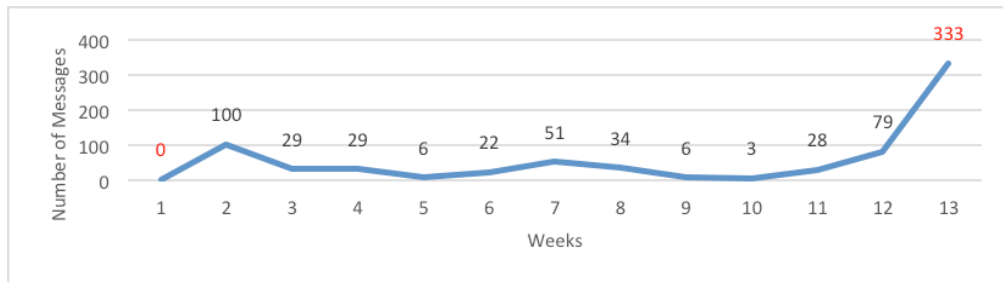


Figure 2. Chat messages per week.

Qualitative data includes a detailed description of the context, direct quotations from participants and excerpts from documents (Merriam, 1988), and participant observation is a common source of data for qualitative case studies. Instant messaging took place within the eCTP chat tool and observing these conversations and reading their transcripts is a type of participant observation (Paulus & Scherff, 2008).

The chat transcripts were analyzed to explore emergent themes and patterns related to what students talked about and how they made sense of their experience. They were copied into a word processing document at the end of the semester, sorted by date and then imported into Atlas.ti 6.2 as a Primary Document of the Hermeneutic Unit (Atlas.ti is a well-known computer assisted qualitative data analysis software).

The end result was a list of themes (Table 1) describing the chat's communication pattern within the virtual community.

Table 1

Themes of Messages' Content Analysis

	Themes "What the students were discussing about, or what the content of the message was..."	Messages	
1	Answer to questions / Responses to an issue	276	32,43%
2	Questions	211	24,79%
3	Acknowledges	113	13,28%
4	Opinions/Ideas/Points of View	67	7,87%
5	Emotions/Impressions/Humor	50	5,88%
6	Clarifications of an issue	36	4,23%
7	Agreement/Convergence of opinions	30	3,53%
8	Narration	21	2,47%
9	Support/Encouragement	20	2,35%
10	Ascertainment/Declaration	14	1,65%
11	Contradiction on an issue	13	1,53%
		851	100%

In order to perform Open/Initial Coding (Saldana, 2009) to the data, the electronic message was chosen as the unit of analysis. Using this model of content analysis, qualitative data were broken into discrete parts and the researcher closely examined and compared them for similarities and differences (Strauss & Corbin, 1998). Moreover, we counted frequency of themes and categories within messages in order to quantify results of the analysis.

Analysis revealed that a synchronous communication (IM) pattern was dominated by eleven themes corresponding to the content of the messages. Answering the central question “what the students were discussing about,” it was evident that their dialogue was centered on the **questions** that student teachers were asking to their peers as members of eCTP. So, a second level analysis was performed on those messages so that the researchers might understand the type and content of those questions and clarify what kind of help users were seeking among peers in the community (see Table 2).

Table 2

Categories of Questions' Content Analysis

	Categories of Theme 2 “What the students were questioning about...”	Messages	
1	Course deliverables: <i>general questions</i>	37	17,54%
2	Technical issues/Use of eCTP	35	16,59%
3	Information about other courses	35	16,59%
4	Course deliverables: <i>self-assessment</i>	23	10,90%
6	Organizational issues	21	9,95%
7	Course deliverables: <i>teaching</i>	18	8,53%
7	Micro-Teaching	16	7,58%
8	Course deliverables: <i>description of an educational dimension</i>	14	6,64%
9	Course deliverables: <i>classroom observation datasheet</i>	12	5,69%
		211	100%

By performing content analysis on the messages of the theme “Questions,” we found that student teachers’ peer questions centered around five major categories: (a) deliverables of the course/practicum at the end of the semester, (b) technical issues, (c) organizational issues, (d) micro-teaching issues and (e) general information about other courses.

It was evident that chat was used mainly as a Query and Answer mechanism within the community of peer students and this outcome is in accordance with Paulus and Scherff’s (2008) research, who found that CMC - as a support mechanism for interns - was used as a forum for university and curriculum concerns among students.

Besides questions as the dominating theme, chat served as a means for students’ emotional relief, having given them a forum to express emotions, humor, anxieties and through this process to offer each other support and encouragement for the successful completion of the internship, as can be seen to the following messages excerpts:

- Just a few days left for the end! Don't worry and be patient.
- Be positive! Good luck with the exams.
- Be positive above all...course is ending and I believe with a good final grade because all of us had work very hard during this practicum!
- Don't get nervous A... we shall find a solution to this problem together.

Also, instant messaging helped individuals in the process of socialization, offering a forum for narration, dialogue, exchange of ideas/opinions and contradiction on an issue within the community, as can be seen to the following messages excerpts:

- Professor X... said that eventually she will give us the email to send the material, but I learned from other colleagues that in the end she only assesses just a few of the exercises.
- Dear M, we all have to follow the same procedure on this. I can't see where the problem is...
- The point is that you can't give a questionnaire to K-1 pupils!
- You are wrong! Micro-teaching refers to student teachers, not to pupils in school.

Finally, examining how the students talked with each other, it was found that messages were characterized by: (a) a strong *sense of emotional engagement* created through several discourse strategies, (b) *responsiveness* to each other's messages - even though this was not an obligation of the course design – thus enhancing their social presence in the online environment of eCTP, and (c) *storytelling* as an important element of the dialogue, an impetus for further engagement by triggering new messages of doubt, ideas, or requests (Paulus & Scherff, 2008).

Discussion

Research on eCTP based on a holistic pedagogical and technological context focuses on the creation of a community of practice among peers during internship, thus promoting greater levels of critical reflection and cognitive engagement.

As Paulus and Scherff (2008) suggested, while scaffolding this type of CMC environments is of great importance, it is not the only action needed in teachers' preparation departments. Student teachers need also emotional support, clarifications on organizational and academic issues, and answers on course and practicum design, assessment procedures, etc.

The results of this study indicate that synchronous communication with the instant messaging mechanism is an effective means of providing peer support among student teachers during practicum, with evidence of social presence, emotional engagement and responsiveness.

Technology allowed students to stay connected with their peer group. They are already deeply engaged in socializing via technologies like Facebook®. Therefore capitalizing on their digital behavior and habits, supportive tools may be developed that can be used during practicum and may prove valuable in teachers' preparation programs, as English and Duncan (2008) and English and Howell (2011) have suggested.

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