Professional Development in an Online Learning Setting Through Collaborative Dialogue

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In this study the author looked at the communication processes and patterns on an online learning platform that was used by an informal study group of 6 teachers. The postings from the teachers on the Moodle learning platform were analyzed by using qualitative content analysis. They were categorized along main communicative codes consisting of content, coordination, organization, and socioemotion. The level of processing of the postings and group phases were also analyzed. To some degree, content-related discussion took place, but most of the postings were superficial. Asynchronous communication as well as the lack of face-to-face-meetings made it challenging not to lose sight of the group's goal, which is why synchronous forms of communication, like Skype meetings, became more important as collaboration developed. Despite the challenges, the teachers saw the benefits of using Moodle, which offered a protected space where they could share ideas.

本研究は、教員6名による非公式研究グループによって使用された学習プラットフォームにおけるコミュニケーションのプロセスとパターンを明らかにする。まず教員らが学習プラットフォームであるMoodle上に投稿したコメントを、内容、協調、組織および社会情緒等の主要コードにより分類した。その上で、研究フェーズごとに投稿内容の充実度を分析した結果、内容のある議論が交わされることもあったが、ほとんどの投稿は表面的なものに過ぎないことがわかった。非同時的、かつ非対面式のコミュニケーションでは、グループの目的を見失わないようにするのが困難であったため、共同研究が進むにつれ、スカイプのような同時的コミュニケーションが重要になった。とはいえ、教員らは、保護された空間で自分の考えを共有できるMoodle上でのやりとりにも意義を見いだしていた。

Collaborative teacher development (CTD) is considered a crucial part of educational settings as it gives teachers opportunities to share and develop ideas together (Johnston, 2014). It is based on the assumption that teacher learning is a fundamentally social process and that teaching should be a collegial profession (Johnson & Golombek, 2011). The view of CTD as a promising approach correlates with the current trend in teacher education and development. In the craft model, learning through imitation is stimulated, and in the applied science model only experts in content knowledge are accepted as able to solve teaching problems. But in the third model of teacher education—the reflective model—a teacher is encouraged to become an autonomous reflective practitioner who is able to take on the challenge of continuous professional development (Wallace, 1991). This view of teachers is shared by Schön (1983) and Dewey (1910/1997), who underlined the ability and responsibility of teachers to analyze and improve their teaching during their careers. Richards (1990) described reflection as a crucial process in which teaching experiences are considered and evaluated. It serves "as a basis for evaluation and decision-making and as a source for planning and action" (Richards, 1990, p. 1). Burton (2014) underlined the importance of collaboration to sustain reflective processes. However, current research confirms that traditional forms of professional development are in most cases not adequate to fulfill the necessary conditions of teacher learning (Guskey, 2002). One-day workshops and seminars can hardly initiate change because they do not build on the former experiences of teachers and are too far away from the individual teacher's classroom situation (Johnson, 2006).

Even though there are many studies in the field of teacher learning that acknowledge the positive effects of collaborative online learning, teacher education usually takes place in formal learning settings (Biesenbach-Lucas, 2004; Zibelius, 2015). The present study, by contrast, was designed to address the question of what happens when teachers collaborate in an informal online learning setting. According to Livingstone (2001), informal learning is defined as learning that takes place without formal context or the necessity to obtain a certificate. Instead, the group develops naturally by deciding the goals and

contents of their exchange based on their individual working methods and working conditions. During a period of two and a half years, the author observed the activities of the group, which consisted of six teachers who worked in different universities in Japan and taught German as a foreign language (GFL). In addition to regular Skype sessions, the teachers posted comments on Moodle; these comments were the main data source used for this study. The aim of the research was to find out to what extent online communication took place and how the group's collaboration developed over time.

The paper is organized as follows: First, definitions and approaches of CTD as well as particularities of computer-mediated settings are discussed. Second, the method and research context of the study are described. Third, results are presented and discussed with regard to the respective literature on the development of online learning groups.

Collaborative Teacher Development

Definitions, Goal and Current Approaches

In this section, I will briefly discuss the concept of collaborative teacher development. A similar term, often interchangeably used, is cooperative development. Researchers agree that both concepts have more similarities than differences. Olsen and Kagan (1992) defined cooperative learning as a

> group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others. (p. 8)

The major distinction between the two terms is that in cooperative learning, work is divided into different tasks that every member completes individually, whereas collaboration is more demanding because members contribute to a common goal and therefore have to work together with other participants in order to complete the work successfully (Olsen & Kagan, 1992). Johnston (2014) defined CTD as "systematic investigation into teaching and learning in which a teacher voluntarily collaborates with others involved in the teaching process, and in which professional development is a prime purpose" (p. 242). Teachers are taking a proactive attitude towards their learning process and are no longer considered as consumers but as producers of knowledge about teaching (Johnston, 2014). Also, Henson (1996) emphasized that teachers should be proactive problem solvers in order to react competently in diverse classroom situations. The aim of all kinds of CTD activities is to help teachers to use and adapt their knowledge according to their needs.

As argued previously, the term CTD is a collective term and, therefore, does not describe any particular methodology, theory, form, or setting. Four criteria can help to define a group (Döring, 2003; Koch, 2002) and apply to CTD groups described in the literature: (a) *ongoing interaction:* there is a regular exchange between the members of the group; (b) *boundary and structuration:* the group has a certain structure and differentiates itself from the surroundings; (c) *sense of membership:* the members develop a sense of communal spirit; and (d) *collaboration:* the members collaborate and help each other. Thus, they share a common goal and therefore want to act for the benefit of all members (Koch, 2002).

There are various terms that describe CTD groups. Richards and Farrell (2005) suggested creating *teacher support groups*, which they defined as groups of at least two teachers who want to achieve a shared goal "on the assumption that working with a group is usually more effective than working on one's own" (p. 51). They described the group as a sheltered space where issues, which are raised by the teachers themselves, are discussed. The importance of a clearly defined goal is also stressed in the definition of collaborative inquiry, which is seen as a process including iterative episodes of reflection and action (Bray, Lee, Smith, & Yorks, 2000). Similar terms often used in the literature are *teacher network* and *learning circle* (Richards & Farrell, 2005). A concept that emphasizes the emotional support—in contrast to teams or groups—is a *professional learning community.* Members of the community share common values and interests and foster deep collegial learning in order to improve students' achievement (DuFour, 2004). The community aspect is also emphasized in Wenger, McDermott, and Snyder's (2002) concept of *communities of practice* (CoP) where regularity of collaboration and the passion for the contents are crucial. CoPs are not restrained to particular domains but can be found anywhere (Wenger, 2006). Contrary to formal working groups, project teams, and informal networks, CoP-members show very high intrinsic motivation because they participate voluntarily in the group and work on issues they are really concerned about. Groups that cooperate mainly online are so-called distributed communities (Wenger et al., 2002). These have special challenges, which will be discussed in the next section.

Characteristics of Computer-Mediated Study Groups

Online learning groups are a good opportunity for teachers to update their knowledge, because there are neither time restrictions nor space constraints. There are various forms of communication possibilities, both synchronous and asynchronous, which make time management more flexible. However, asynchronous communication can have some pitfalls. Often, discussions take a long time to start or end abruptly (Winkler & Mandl, 2004). Low response from other participants can also lead to misunderstandings and can

negatively influence the writer's motivation to contribute to postings. Another problem can be the tendency to reduce one's own effort when working collaboratively on a task (*social loafing*)—a phenomenon that is also described as *free rider problem* (Döring, 2003). The opposite effect is described in the phenomenon of *social facilitating*. In this case, the motivation of individuals increases because they feel that their contributions are acknowledged by other participants. Also, the increase of online visibility influences community members' willingness to contribute to discussions and can help prevent misunderstandings (Kreijns, Kirschner, & Jochems, 2003).

Method

Context of the Study

The participants of the group were six female teachers (two Japanese, four Germans) who worked at different universities across Japan. One teacher left the group at an early stage of collaboration. The teachers taught GFL at different ability levels. All had taught GFL for longer than 5 years, four of the participants for more than 10 years. The teachers were interested in the same topic—communicative teaching approaches—and decided to start a support group in order to foster exchange in that area. Of special interest for the group were learner-centered activities such as the use of language learning games in class. Because all teachers worked at different universities in Japan and face-to-face-meetings could only take place sporadically, the group decided to use online communication tools such as Moodle and Skype. The former was used as an asynchronous communication tool; the latter was used as a synchronous communication tool.

Because the author planned to carry out research on the professional collaboration aspect of the group, the teachers were informed about the project and signed an agreement form enabling data collection. Throughout the study, the author was both a researcher and member of the group. This approach can be defined as action research; the goals are twofold: to solve a problem or to change existing situations (Coghlan & Brannick, 2014).

Research Questions

The author wanted to know what happened when teachers interacted on an online learning platform in an informal learning context. The focus of the analysis was to find out how group work developed over time, and how the teachers used the Moodle learning platform in the context of their group work (i.e. what kind of communication takes place on the platform and to what extent topic-related communication occurs). Hence, the research questions were as follows:

RQ1. How does the group develop over time?

RQ2. Which communicative utterances can be identified frequently on Moodle?

Data and Analysis

The primary data for this research consisted of comments from the Moodle online learning platform that were posted between October 29, 2014, and August 8, 2016. In total 231 postings were analyzed. Furthermore, Skype sessions took place, which delivered important additional information for answering the research questions. Before starting exchange via Moodle in October, the teachers had an initial informal exchange through email.

The online comments were imported into the software MAXQDA and analyzed following qualitative content analysis, which allowed a systematic, rule-guided analysis of the data (Mayring, 2010). The coding frame formed the center of the analysis process. It consists of categories that are the aspects on which the analysis focuses (Schreier, 2012).

Some postings were categorized several times according to the types of utterances identified in the comments. The smallest units of analysis were single sentences. For all categories, definitions were written as well as example phrases that allowed for precise categorization. In addition, rules for unclear cases were developed to help maintain consistency. The main categories were then split into subcategories and are listed in Table 2.

Motivation of Participants and Temporal Sequence of Group Phases

When face-to-face meetings took place, teachers discussed their reasons for joining the group. The following were mentioned:

- identifying new teaching methods, ideas, and materials;
- the need for exchange with colleagues who have similar interests;
- the exchange (and modification) of teaching material for different target groups;
- pressures and motivation for engaging in group learning;
- reflection on one's own teaching practice; and
- reconfirming one's own teaching practice.

The group worked together from February 2014 until August 2016. Several decision-making points regarding communication tools, working methods, and contents were identified. Retrospectively, the group phases in Table 1 were distinguished.

Table 1. Temporal Sequence and Subject Focus of Group Phases

Time period	Subject focus
February 2014 - April 2014	Forming and exchange (via email) about possible working contents
May 2014 - October 2014	Discussion about organizational structure and working methods, further exchanges about the topic
October 2014 - March 2015	Further exchange, start of Moodle phase, reading and discussions on a book on communicative task design
April 2015 - August 2015	Decision to carry out an action research project on a vocabulary learning activity, planning of research project
September 2015 - March 2016	Classroom research project by means of classroom observations and written questionnaires
April 2016 - August 2016	Collaborative writing of a scientific article about the group's research activities

Results

Development of the Group

The goal at the beginning of the collaboration was to read assigned chapters from some training materials according to a set timetable and to discuss the topics on the online platform. Moderators were assigned to structure the discussion. However, this proved to be difficult because the participants' postings were sometimes not sufficient to initiate a discussion. Aspects regarding the research project of the group, however, were more conducive as they provoked more comments.

The group phases listed in Table 1 were similar to Tuckman's (1965) and Tuckman and Jensen's (1977) phase model of group development. According to Tuckman's model, a group goes through five phases: *forming* (characterized by uncertainty and anxiety), *storming* (characterized by growing confidence as well as uncertainty), *norming* (acceptance and start of content work), *performing* (efficient working), and *adjourning* (disbanding of the group). The group described here went through three important decision-making points: (a) choosing training material for reading and discussions, (b) deciding to carry out a research project, and (c) deciding to publish their results in the form of a scientific article. Each decision-making point was followed by a working phase. Hence, the group went through the forming phase as well as through the storming phase three times. Elements of the storming phase were conflicts stemming from different expectations within the group, but these were overcome in the long term. Also, the fact that the composition of the group changed during the course of the collaboration influenced group dynamics to a certain degree (i.e., one teacher joined the group and another one left because of lack of time and change in interest). Norming and performing phases could only be reached after the second and third decision-making points.

Repartition of Postings

An important tool for communication was the Moodle learning platform even though regular Skype meetings were held as the research project progressed. Most comments did not stand alone but triggered a response (95.69 %). Table 2 below shows the repartition of the postings.

Table 2. Proportional Repartition of Posting Categories (*N* = 231)

Main categories	Percent	Subcategories	Percent
Coordination-related utterances	46.4	Time	55.9
		Content	19.1
		Working style	10.2
		Expectations of participants	8.9
		Discussion	5.9
Content-related utterances	25.9	Research project	34.1
		Teaching methods and activities	24.1
		Ask for opinions	18.2
		Exchange of materials	12.9
		Incorporation of ideas	10.6
Socio-emotional utterances	16.5	Expression of thanks	38.1
		Private issues	24.1
		Encouragement	22.2
		Ask for understanding	15.7
Organisation-related utterances	11.1	Technical problems	50.7
		Structure of the group	23.3
		Planning of other activities	26.0

Level of Reflection

In the introduction of this paper, it was argued that reflection is highly necessary to deal with challenges in the classroom and to improve teaching practices (Zeichner & Liston, 1996). In this study it was found that the reflection level of an utterance was low when the teacher asked for further details, gave more information, or expressed her own opinion without providing supplementary explanations. In contrast, it was high when the teacher delivered opinions with supporting reasons, reflected about personal teaching experiences, or analyzed teaching methods on the basis of merits and demerits. Table 3 shows the percentage of utterances with low and high reflection levels.

Table 3. Level of Reflection of Postings (*N* = 231)

Reflection level	Percent
Low	87.7
High	12.3

One example for each type of reflection follows. At the beginning of the exchange phase the group members reflected on tasks and task sequences in their lessons. One teacher was asked if she reflected systematically and regularly about the learning goal of each exercise. Her response was "Not really. I do that automatically. And I never really cared which exercises really work and why. I don't have time for that" (November 11, 2014). The teacher could not justify why she used certain exercises, but she realized that she acted automatically. This was judged to be low reflection level. In postings that demonstrated a high reflection level, teachers described teaching experiences and activities that they use in class and justified why they used the respective task or approach. After the group had decided to work on the research project, most content-related postings referred to vocabulary learning and the use of learning strategies. In thread 13 of the news forum (June 11, 2015), a teacher gave detailed descriptions about a possible empirical study design she wanted to carry out.

Discussion

Prior research has documented that online groups have to follow certain rules, whether mandatory or self-imposed, in order to work together successfully and fulfill their tasks. In former studies, the following principles were considered to be important:

- make sure that the objectives pursued are clear and valuable for all (e.g., Wenger et al., 2002),
- offer different communication channels for synchronous and asynchronous modes (e.g., Wenger et al., 2002),
- determine how often the group members meet (e.g., Blumenfeld, Marx, Soloway, & Krajcik, 1996; Wenger et al., 2002),
- reflect on group member roles (e.g., Zibelius, 2015),
- openly handle conflicts and different expectations (e.g., Griffith, Mannix, & Neale, 2003),
- reflect on the learning process (e.g., Carell, 2006), and
- support development of group identity (e.g., Brindley, Walti, & Blaschke, 2009).

However, these studies were either short-term studies or were focused on formal seminars or workshops. Brown and Munger (2010), who analyzed the interactions of an online learning group, found that meaningful communication can take place but that dialogues that would have fostered the participants' deeper learning tended to be rare. Therefore, they came to the conclusion that substantial transformations in teaching practice and the development of deep, reflective understandings through online discussion forums are rather unlikely, but teachers can gain basic declarative and procedural knowledge that might lead to changes in practice. However, this study found that the teaching practices of the participants had changed for 10% of the utterances—categorized as "incorporation of ideas"—when teachers reported changes in their teaching as a consequence of collegial exchange.

However, asynchronous communication through Moodle as well as the lack of face-to-face-meetings made it challenging not to lose sight of the group's goal. Also, lack of time was a problem that teachers had to deal with on a regular basis during the whole collaboration period. Additional Skype meetings were therefore essential to bring the group's work forward. Nevertheless, reflections on the goal of the group work led to decision-making points and helped to reinforce the value of group work.

All teachers emphasized that the role of the moderator was especially important for holding the group together by reminding teachers regularly of tasks that needed to be done. As some teachers could not spend as much time on tasks as could other teachers, conflicts tended to arise now and then. Through the moderator, these conflicts could be resolved by discussing the reasons for low participation and suggesting ways to increase cooperation.

It was found that topics that addressed socioemotional aspects played an important role in maintaining a good working atmosphere within the group and helped to foster group identity. Other studies have also highlighted the necessity of emotional support (Johnson & Johnson, 2004) and the fact that messages become more friendly and personal as collaborative learning develops (Oren, Mioduser, & Nachmias, 2002).

Conclusion

This study found that collegial exchange through online tools was beneficial. In particular, participants appreciated the cognitive and affective support offered by the system. They had the possibility to share classroom ideas and to develop their teaching methods. Mutual encouragement and the possibility to talk about problems they experienced in their respective working contexts were also valued.

However, due to the limited scope of this study, the results can only apply to CoP situations as described in this article. The size of the group, members' goals, and members' attitudes can affect group dynamics and might trigger other challenges for the group. Thus, factors that influence and foster collaborative dialogue on online platforms should be researched in a wider context. In this study, it was not possible to establish if exchanges on the platform led to deep, permanent learning. Even though it was possible to show that exchange helps facilitate learning, the extent to which deep permanent learning occurs still needs to be established. More studies that address the issue of professional development and how informal, online collaborative learning can help support teachers are needed in the future.

Bio Data

Katrin Niewalda obtained her degree in German as a foreign language in 2010 and has been teaching in Japan since 2011, currently at the Department of German Studies and Culture at Sophia University. Her research fields are L2 didactics and teacher research.

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