Special issue
Reshaping professional learning
in the social media landscape:
theories, practices and challenges

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Indice

Teachers' reshaping of professional identity in a thematic FB-group

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Abstract

The background of this study is teachers' increasing use of social media for professional learning. Swedish teachers often use thematic Facebook groups to discuss the subjects they teach, their approaches, methods and assessment. Although previous research has shown that teachers' participation in social media has a positive impact on teachers' professional learning, the interaction is described as relatively straightforward and superficial. In this study, we use computational approaches to identify 79 in-depth discussion threads that help uncover the norms of teachers' social media groups. These threads are analysed in detail using the concept of professional *identity work* (Goffman, 1959). The findings show that the discussion threads were formulated as questions or requests, and reveal ways teachers engage in extensive professional identity work by drawing on established norms to position themselves as legitimate Facebook group members and as professional teachers.

Keywords: teachers, Facebook, computational approaches, interaction analysis, identity work

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1. Introduction

Organized teacher professional development (PD) have been widely documented as fragmented, disconnected and often irrelevant for the actual challenges of classroom practice (Opfer & Pedder, 2011; Tour, 2017). Rather than engaging teachers in collaborative and collegial learning activities, one-day workshops or short-term training conferences are usually held to fulfil school accountability measures, failing to have long-term impact on teacher effectiveness (Sandholtz & Schribner, 2006; Webster-Wright, 2009). Therefore, social media has now become a prevalent phenomenon in teachers' work. Platforms such as Facebook (FB), Twitter or blogging are increasingly being used as a means for sharing resources, student and parent interaction and collegial discussions. Developing such informal learning networks is increasingly realized through participation in thematic FB-groups. Research is slowly starting to explore the impact of teachers' participation in social media for professional learning (Bodell & Hook, 2011; Maciá & García, 2016; Wesely, 2013). This research has mainly been achieved through interviews and surveys with a focus on teachers' perceptions of social media for professional purposes. To date, few studies have systematically analysed teachers' online discussions or used computational analysis techniques with very large datasets (Maciá & García, 2016), which this study sets out to do. We investigate the discussions taking place in a teacher-initiated FB-group by examining what Robson (2017, p. 1) refers to as "the messy social realities of online interaction."

The corpus of this study is collected from a large teacher FB-group that includes almost 3,000 posts and over 16,000 comments from a three-year period (Lantz-Andersson, Peterson, Hillman, Lundin, Bergviken & Rensfeldt, 2017). The group is organized around the Flipped Classroom (FC) approach, which can be described as an instructional strategy that reverses the typical classroom learning environment by delivering instructional content outside the classroom (Sams & Bergmann, 2013). As a method for selecting particular interactions for detailed analysis, we have chosen to focus on cases of discussion threads that appear to diverge from the norms of the group at

a metadata level, on the grounds that cases where norms are broken reveal much about those norms. In particular, we identify instances of threads that deviate from the metadata norm in the corpus that threads generally have a balanced number of likes and comments. The aim of this study is to examine the kinds of posts that occasion extensive discussions and thus deviate from the norm by receiving many more comments than likes. The following research questions have guided the study:

- What characterizes the posts that deviate from the norm and receive significantly more comments than likes?
- What is the nature of the discussions that are established in these threads?
- How are teachers' professional identities enacted and revealed through the interactions in these threads?

1.1. Previous research on teachers' online participation

An increasing number of studies show that teachers participate in social media foremost for *sharing* and professional *support* (Carpenter & Krutka, 2015; Davis, 2015; Kelly & Antonio, 2016; Macià & García, 2016; Ranieri, Manca, & Fini, 2012; Wesley, 2013). Carpenter and Krutka (2015) surveyed 494 K-16 teachers' use of Twitter and found that teachers emphasized sharing and/or access to novel ideas and applications as two central practices. Davis (2015) also found that online interaction enabled support for teachers when looking for new ideas and applications. Similarly, Weseley (2013) reported that sharing of well-chosen content in bottom-up online communities supported teachers in developing teaching-domain expertise.

Most research recognizes sharing as a key characteristic of teachers' online participation, thus facilitating a sense of belonging and arenas for networking. Consequently, teachers' online interactions are taken to be more beneficial than organized PD. In contrast, other research reports that teachers' social media interaction involve relatively short and superficial exchanges of information. Tsiotakis and Jimoyiannis (2016) found that teachers generally used social media "to seek information and quick answers to current instructional problems" (p. 56). Furthermore, Brown and Munger (2010) concluded

that teachers "rarely engaged in the depth of processing that is likely required to promote transformative changes in understanding or professional practices" (p. 541).

A number of studies have also looked at the role of support in teachers' use of social media. Kelly and Antonio's (2016) study of large open online groups reported that the predominant focus of teachers' online participation was to provide pragmatic support to other teachers. Rodesiler (2015) pointed out the establishment of a supportive community as key to teachers' participation. Trust, Krutka and Carpenter (2016) concluded that having other teachers available 24-7 render possible professional growth of teachers. Teachers using social media for sharing and for professional support can be seen as transforming teachers' isolated work to community-based (Ranieri et al., 2012). However, the range of platforms available and different online groups' interests makes it important for researchers to be careful about broad generalizations of exaggerated benefits (Weseley, 2013). Thus, studying teacher professional use of social media requires a methodological consideration as well: moving beyond a research focus on teachers' individual perceptions and opinions about social media use to empirically study teachers' online interactions as new types of collegial discussions that, while rich, could be characterised as unpredictable when compared to more organized PD initiatives.

2. Theoretical framework

This study draws on a situated learning perspective in which social interaction, communication and collaboration are seen as essential components in human activities (Lave & Wenger, 1991). In interaction with more competent and experienced members, we learn and become knowledgeable about valid ways of contributing to a specific practice. This implies that communication is considered the most central aspect in human activities and the way in which the context of a situation is interpreted largely determines what we say and do (Wertsch, 1998). Goffman (1974) suggests that participants assess a situation and act accordingly, which, in turn, reflexively produces the kind of situation

that is momentarily established, i.e. the *framing* of the situation. In this study, the selected threads are analysed in terms of how teachers interact through professional *identity work*, i.e. how they present themselves in alignment with the framing of the situation that includes the expectations of other participants and the established norms of the group. Such norms are made visible as participants in a situation align with the group as a *performance team* cooperating "in staging a single routine" (Goffman, 1959, p. 85). Moreover, depending on how team members stage their individual performances within the established team, the participants employ interpersonal rituals that become evident especially when something at stake is addressed. These rituals could, for example, be *supportive*, contributing to maintaining or re-establishing an interaction order, or *remedial*, as explanations or mitigations for statements said or done that break the established norms of the group (Goffman, 1971). The use of such accounts defines the interaction in such a way as to leave intact the established norms.

3. Methods

To collect the activity in the FB-group, we used programmatic approaches to query the Facebook database through their Graph Application Programing Interface (API) and to assemble a corpus of all the activity in the group for the three years between the groups inception in April 2012 and May 2015. This data includes all posts, comments, likes, usernames and timestamps for these activities. It was then organized into an analysable form drawing on methods that have been characterized as trace ethnography (O'Keeffe, 2016).

Since the corpus amounts to almost 3,000 posts and over 16,000 comments, it became important to find ways to identify discussion threads of particular relevance for detailed interaction analysis. Computational techniques were used to find patterns useful to select particularly relevant threads. Informing this computational process, we engaged ethnographically with the group to get a sense for the kinds of discussions taking place (Davies & Merchant, 2007). This enabled us to identify possible features of the discussion threads that could then be investigated at the macro level through exploratory data anal-

ysis techniques to check for patterns (Morgenthaler, 2009). Following our aim of uncovering the established norms within the group, we chose to examine those threads where the original posts that started threads generally received a relatively balanced number of likes and comments. Across the corpus, the mean ratio between comments to likes for all threads is 0.87, meaning that for every 100 likes a post received, on average it received 87 comments. However, the relationship has large variation with a weak correlation between the number of comments and likes (r=0.233, p <.001). Given this large variation, it is useful to note that a strong majority of 2291 out of 2970 (77.14%) threads in the corpus received an equal number or more likes than comments. Only 422 out of 2970 (14.21%) threads received more than one standard deviation above the mean (2.85) regarding the number of comments to likes. These few threads with significantly more comments than likes are an unusual occurrence in the group and deviates from the general norm for liking and commenting behaviour.

Examining the 422 identified threads, we found that 72.59% of posts had received five or fewer comments. To have the best possibility of selecting a manageable number of relevant threads where the interactions could be used to unpack the topics and norms of the group, we chose to focus on the subset of posts that received more comments than the corpus mean (4.97) plus two standard deviations (15.98). Out of the 422 posts, 79 received between this threshold of 20.95 and the maximum number in the corpus of 155 comments.

Once 79 threads were selected, we examined the original post for each of the threads focusing on identifying similarities and differences through thematic analysis (Braun & Clarke, 2006). First, two of the authors coded the material individually by considering aspects such as topicality, phrasing, expression, etc. Discrepancies between coding were discussed between all three authors and the original posts were categorized into four themes. Lastly, the accompanying discussion threads were manually screened to identify illustrative instances for each theme, as presented below. All names are anonymized to protect teachers' identity and text are translated from Swedish into English following the ethical approach according to which ethical considerations are *situated*, i.e. dependent on the contingent powers of the ana-

lytical focus, methodological choices, and participants involved in the activities under study (Simon & Usher, 2000).

4. Findings

The 79 posts that received significantly more comments than likes were formulated as either questions or requests. The thematic analysis of the posts revealed four themes: 1a) *functionally motivated technical features*, 1b) *instructionally motivated technical features*, 2) *pedagogical ideas and premises*, and 3) *sharing* (Table 1).

Table 1. Categorization of 79 posts in the selected material

Themes	Number of posts
1) Technical features	44
1a) Functionally motivated	31 (8 overlaps with 1b)
1b) Instructionally motivated	21 (8 overlaps with 1a)
2) Pedagogical ideas and premises	20
3) Sharing	15

Functionally motivated technical features (1a) includes questions about specific apps, blogs, video production and screen capture tools, online tests, etc. Most of these posts lacked any description of teachers' experiences of using such features. However, the 21 posts categorized as *instructionally motivated technical features* (1b) involved teachers' discussions on how to use them in teaching. *Pedagogical ideas and premises* (2) consists of posts related to various instructional dilemmas and choices that were generally linked directly to the FC approach (pros and cons, homework, student engagement, etc.). *Sharing* (3) includes posts where teachers offer resources and self-produced materials like videos. These posts with many comments differ from other posts in the group where resources are shared but fewer comments are received as they explicitly request feedback.

While both *pedagogical ideas and premises* and *sharing* are important types of posts within the group, they represent practices that have been identified by previous research as meaningful for teachers' professional

learning (Tsiotakis & Jimoyiannis, 2016). By contrast, the two forms of *technical features* represent post types that have often been overlooked or discounted as superficial in the literature (Brown & Munger, 2010). For the purposes of the limited scope of this article, we focus the remaining discussion on the selected posts that were categorized as *technical features*. On the surface, these 44 posts may come across as including straightforward questions that might not be perceived as much relevant for teaching practice. However, as illustrated below, these posts trigger discussions where something is at stake in terms of how teachers' professional identity is performed and revealed in the discussion threads.

1a. Functionally motivated technical feature

The 31 posts included in this category represent an unusual situation where a seemingly simple question like the one in Post 25 below generates as many as 24 comments, suggesting that such posts should not be quickly dismissed as superficial. In this post the original poster (OP) asks about which blogging platform other teachers would recommend for sharing flips and other instructional material:

Post 25 (1 like, 24 comments)
OP: Hi! What blog would you recommend if one wants to blog flips and other instructional material?

Comment 1
Mod: Blogger. It is easier to grasp. WordPress can give you greater opportunities, but they are seldom needed. Blogger, YouTube, Gmail, Chrome and Drive can be accessed with the same login. Many seem to recommend WordPress because it is "more common", which seems like a strange argument to me. The most important thing is that you enjoy what you blog with!

Comment 2
C2: I use Wordpress, but I do not think it matters. Or what do you say [mod's first name and surname]!?

Comment 3
C2: You are quicker than me [mod's first name]!!

Commentator 1 (C1), who is also the group's moderator (Mod), recommends one specific blogging platform offering "it is easier to grasp" as the main argument for the recommendation. The moderator also mentions another platform, but she is reluctant to recommend it simply because it is commonly used. Although determined in her recommendation, C1 opens up for teachers to choose the blogging platform best suited for their work with the FC approach. Comments 1 and 2 evidently overlap as C2 recommends precisely the tool that C1 has dis-

missed while addressing the moderator by name (when the moderator has already provided her recommendation). C2 also comments upon this overlap in Comment 3. Interestingly, C2 addresses the moderator not by tagging but writing the moderator's full name in the comment, which shows a strong orientation to the moderator of the group. As part of recommending a specific blogging platform, C2 also makes a remedial comment, "but I do not think it matters", mitigating the choice of a specific tool and thus seeking authoritative support from the moderator in such a claim. The first 17 comments directly address the original post and several different blogging platforms are recommended straight off. In this thread, the original poster is evidently responsible for following up on the question initially posed. When C4 recommends two blogging platforms, the original poster responds by making C4 accountable for such a double recommendation:

Comment 17
C4: Blogger is smooth of its only for blogging. Also find webniode to be quite good if you want something else.

Comment 18
OP: In what way is webnode good/better?

Comment 19
C4: Webnode is a homepage and a little more advanced. You can do more than just blog. But if you are only to blog then blogger is the best.

The interaction above illustrates how discussion threads that are established on the basis of a seemingly simple request do not necessarily concern superficial collection of suggestions. The original poster continues the questioning of simple 'on the one hand and on the other hand' suggestions by calling on teachers with blogging experience to discuss the idea of blogging itself:

Comment 20
OP: Those of you who have experience with blogging...why is it not enough to post everything on a YouTube channel instead of blogging?

Comment 21
C5: Maybe you want to write notes, upload planning etc etc.

Comment 22
OP: I was thinking of both sharing films and other material

Comment 24
Mod: Why blogging? – Partly because it is neater. A neater appearance means more than you might think. You can also organize your material better. You can also put in other things that are important for teaching such as e.g. schedule, calendar, links, etc. A blog can simply be much more personalized and that is an advantage in many cases.

The OP specifies the original post by addressing more knowledgeable and expert teachers that use blogging platforms. The OP works to trigger a discussion rather than asking for straightforward suggestions. As OP somewhat provocatively suggests YouTube as an equally appropriate tool, C5 pinpoints the advantages of a blog for including written materials, archiving features not available in YouTube (Comment 20). The OP clarifies that videos and written material is to be shared and the discussion ends. The next day the moderator closes this discussion thread by providing several arguments for blogging, such as a nice appearance, organizational features and personalization (Comment 24). Through the interactions in the thread, a repository of possible technical resources is established, but it is augmented by arguments for choosing a specific tool over another and for choosing to use a blog at all.

1b. Instructionally motivated technical features

Twenty-one of the posts concerning technical features were requests for descriptions of instructional experiences using specific technical features of apps, programs and tools. In the following, we will analyse the unfolding of a discussion thread following an original post where a teacher asks other teachers about their experiences using FB for student information. The first uptake is provided by C1, who provides lots of experience with using FB for student information, documentation and interaction:

Post 71 (8 likes, 102 comments)
OP: Anyone using Facebook to handle information to students? Would like to hear how you think it has worked.

Comment 1
C1: All classes at our school have their own FB-group. We use it for different purposes partly for information but also documenting what we do together with the students :-) links to their own films in different subjects, links to the blog, etc. We have parents, students and teaching staff in the group. Parents are very pleased and say that they have never been so involved in their children's learning as now! Both students and parents are active together on the page ;-) all information handling becomes so much easier:-) so thumbs up for FB!

The original post is not primarily focused on the functionality of the tool, but it is directed at the instructional premises for using such a tool. C1 points to only positive experiences of using FB for student communication by referring to similar positive experiences among colleagues. Furthermore, C1 expands on the areas of FB application

not only to include information to students, parents and teaching staff, but also documentation and sharing of student work. The teacher also voices parents' experiences of using FB as satisfying, describing the platform as a space for "active" interaction with students and parents. This comment is followed by a longer discussion where several teachers contribute with supportive, positive experiences and local descriptions of how they have used FB at school. Analytically, these comments can be understood as supportive rituals performed by the teachers in the group. FB is highlighted as a productive tool which students are already engaged with and as a productive complement to other learning platforms sanctioned by the school administration for engaging students, parents, teachers and other staff.

The thread about FB use eventually turns into a discussion about managing privacy settings where the teachers engage in professional identity work. Some more challenging issues arise when one teacher stresses that information on FB must be complemented with e-mail and SMS as FB is not used by all. C2 raises a very specific technical question about how friend invitations work in FB:

Comment 43
C2: Do I have to be "friend" with students and parents to be able to invite them into the group?

There seems to be some uncertainty about FB settings. As a response to this uncertainty, one of the more experienced teachers shares her approach with students: all students are listed in a separate group and they are prevented from reading her private posts. Some teachers, the OP included, suggest that having a private and a professional FB profile is a good way to handle privacy issues. Interestingly, to separate teachers' private and professional roles with two profiles is rebutted as C3 points out that FB has a policy of one account per person:

Comment 50
C3: But you are only allowed to have one FB-account. I think it is important to follow their rules.

Arguing that is important "to follow their rules" (Comment 50), C3 pinpoints a specific professional attitude to the privacy settings that contrasts other teachers' attitudes. As a mediator in this animated

discussion where professional identity work is performed, in Comment 43 C4 addresses the issue about befriending students in FB:

Comment 63

C4: But you do not need to be friends with them, that's the point! I can't see the students' private sites if they aren't open… I can't even send messages to all some have locked that as well.…And I have locked..

C4 repeats a previous comment and stresses that it is not necessary to be friends on FB to organize a FB-group of students and parents, thus providing a "work-around" to the discussion about having several profiles. What is evident in this discussion is professional identity work where (at least) two professional attitudes are drawn on and argued. This discussion relates to being a professional teacher using FB as a school platform while establishing a clear division between (at least) two professional teachers' identities. On one hand, a teacher identity advocating working in line with FB policies, having one profile and working within the system with closed groups and settings that separate student and parent from private interaction is established. The central argument is that the teacher needs to be the administrator, activities are organized by the school and not by the students, and thus two profiles are not an option. On the other hand, a teacher identity advocating two profiles to keep private and professional activities completely separate, enabling the possibility to invite students and parents to more specific groups, is claimed. One of the arguments brought forward is that such a professional account could potentially anticipate parents' suspicion about teachers being FB-friends with their students. These two sides of the discussion are by no means resolved when this discussion thread ends. Some teachers contribute with cautionary tales about using FB as a school platform and concern about teachers' responsibilities for making sound professional judgements about when and how to use FB. Such professional judgments are exemplified in Comment 88 where C5 shares current ways of working with FB for student interaction. C5 also sets the general advantages of using such a platform for individual student that are less forward and do not show their full potential in the classroom:

Comment 88

C5: I also have a closed group where we are not friends, works well, except I even have some that are not on fb. I usually have most use of fb when it is getting close to exams. Then students can write questions on a math or physics assignment, and if I am not quick to answer, other students can help. What they write is really good for my assessments, I see a lot of proficiency on fb that shy students don't show in the classroom.

As this thread begins, what it means to be a professional teacher with regard to using FB for student and parent interaction is not established within the group. However, as the discussion unfolds, arguments for different professional identities are brought forward and negotiated. What starts as a seemingly straightforward question about the use of FB for student interaction is transformed into an animated discussion where teachers' different professional attitudes and identities are brought forward and challenged. Teachers seem to leave the discussion agreeing to disagree about the ways they work with FB as part of their professional work.

5. Discussion and conclusion

This study analyses the discussions in an informal teacher thematic FB-group that showed avenues for teachers' professional learning and professional identity work. The analysed interactions unpack instances where teachers' work and instructional practices are negotiated, disputed and debated. Findings point to the presence of teacher professional learning in discussion types that contradicts previous research where such types of teacher participation in social media is described as relatively superficial exchanges of information (Kelly & Antonio, 2016; Tsiotakis & Jimoyiannis, 2016). On the surface, many of the posts in our data seemed to consist of rather straightforward questions; however, as our analysis of *technical feature* threads shows, discussions were triggered where teachers were made accountable for pedagogical choices and instructional methods. Professional identities were in some cases challenged and the issues at stake were discussed. This highlights the need for applying appropriate methods and analytical strategies to identify relevant instances and come closer to the actual interaction in social media to better understand the range of activities taking place (Lave & Wenger, 1991). In the following, we will discuss how the findings of this study may inform organized PD practices.

First, we argue that sustainability of the group is important. The discussions in the studied group stretch over extended periods of time, either in one discussion thread or as themes in several threads.

This ongoing professional discussion is rarely found in organized PD, which is often characterized by fragmented one-day workshops with limited relevance for current teaching and classroom challenges. Although many organized training efforts implement online platforms to trigger discussions and networking, social media groups are initiated by teachers themselves. This means that teachers take responsibility for nurturing the discussions, following up on posts and comments and for providing support and recognition to teacher colleagues. The group studied here provides an arena for here-and-now questions and requests, open-ended discussions and recurrent discussions about teacher identities and work. Our findings show that being a professional teacher with regard to issues like using FB for student and parent interaction is not established beforehand, but it is negotiated along the way as arguments for different professional identities are brought forward. It is not only that "different aspects of professional identity were important to different teachers" (Robson, 2017, p. 7), but also that these aspects become negotiable by the supportive and remedial rituals established in the group (Goffman, 1971). It takes time and engagement for such rituals to be established in a group, time that is seldom invested in organized PD.

Our findings not only highlight how cultivating norms or rituals are central to sustaining the discussions in the group, but they also point to the important roles of the group moderator and experienced teachers. In the example about blogging platforms, more experienced FC practitioners differentiate themselves by presenting a professional identity where they take responsibility for explaining the professional advantages of a particular approach while opening up for teachers' own responsibility to use the approach as best fits. This situation shows a strong alignment of the experienced practitioners in the team-work of the group (Goffman, 1959). Such forms of professional identity work by more and less experienced FC teachers is a central aspect of the sustainability of the group. Similarly, active presence of the moderator plays a key role in the discussions, acting also as an expert of the FC approach.

Given the norms and roles established in the group and their responsibility for sustainability, an interesting issue is whether it is pos-

sible to design situations where the kinds of elaborated discussions found occur as part of an organized PD initiative. Complicating the issue further, the teachers in the studied group participate in a wide range of ways, including central participants regarded as "knowledge-able" or who is actively involved in using the group to share material and pose questions and requests. Most members, however, participate in the discussions as *authorized visitors* that observe through following, reading, and liking (Lantz-Andersson et al., 2017). It is reasonable to assume that the former kind of teacher participation is more likely to lead to transformational thinking and/or professional identity development. However, the implications that online discussions have for the majority of teachers that actively participate in the group are issues that need to be explored further, especially in relation to organised PD, where active contribution by all participants is generally expected. Data collected for this study was also limited to online content shared via a social networking site that require registration. Future studies exploring teachers' online participation might focus on content that is not available openly, as teachers explore similar teaching and learning issues with "friends" via other social networking sites that are not professionally oriented and remain private.

Our analysis shows that for some members extensive professional identity work takes place in the studied FB-group, providing these teachers with the possibility to learn and develop in professionally relevant manners. Although teachers' professional learning and social networking are recognized by previous research (Kelly & Antonio, 2016; Macià & García, 2016; Robson, 2017; Trust et al., 2016), the tendency is to characterize online interaction as delivering simple support. One reason might be that, as in the case of the group in our study, most members post only occasional short interactions. The sheer volume of interactions makes a challenge to identify posts that occasion more elaborated discussions amongst those that are more fleeting, even if those few posts account for the majority of comments in the group. To move beyond a shallow picture of teachers mostly having their immediate pragmatic needs satisfied by participation in social media groups, this study focuses on instances of particular relevance and analyses them in detail. Not only is further research on

teachers' situated interaction online necessary to find ways to understand the implications for teachers' daily work and classroom practices, but there is also a need for more detailed investigations into how social media use, initiated outside organized PD settings, is part of re-shaping teachers' professional learning with the potential to further inform future PD initiatives.

Acknowledgements

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