

Power Relations And Authority in Teachers' Online Communities of Practice: Formation, Impact, And Implications

--Based on the Analytical Perspective of Goffman's Microsociology

Mingxue Xu¹, Zhao Zuo¹ and Ling Chen^{1,2,*}

¹ Faculty of Education, Beijing Normal University, Beijing, China

² Advanced Innovation Central Future Education, Beijing Normal University, China

* Corresponding author

Abstract: Teachers' online communities of practice have become ideal environments for teachers' professional learning, however the catalysts and derivatives of interpersonal interactions, such as power relations and authority in teachers' online practice communities have not received enough attention -- these factors affect the inquiry and learning in teachers' online practice communities to some extent. This study selected a case study of an online community of practice composed of four teachers. Based on the relevant concepts of Goffman's micro-sociolinguistics, we explored how teachers construct power relations and authority through discursive interactions in an online practice community, as well as its impact and implications for teachers' pedagogical inquiry and learning. This study analyzes discursive interactions in teachers' online communities of practice from a sociological perspective, providing a new perspective for analyzing teacher participation and learning in teachers' online communities of practice.

Keywords: Online communities of practice for teachers; Goffman; Microsociology; Power relations and authority.

1. Introduction

Community of Practice (COP) is an effective learning system for teachers to discuss and negotiate in depth around classroom teaching issues, which consists of student teachers, mentor teachers (teaching assistants/co-teachers) and experts, etc. It aims to promote the professional development of teachers and the improvement and optimization of teachers' knowledge, skills, and practices through peer dialogues, reflections on practice and expert guidance, and to provide social, diversified, and continuous learning support services for teachers' growth. With the development of network technology, teacher communities of practice have gradually entered the "cloud", breaking through the limitation of time and space, enabling teachers to form a community of practice online and an informal virtual learning communities. The online teacher communities of practice have emerged. The training of pre-service teachers or novice teachers is an important part of the construction of teacher team. As an important activity form to support the growth of novice teachers, the effectiveness of the online community of practice for teachers depends not only on the organization and design of the activity, but also on how the principal teachers in the community of practice participate in pedagogical inquiry and learning.

Just like the interpersonal interaction occasions, the interaction mode in the teacher community of practice is also influenced by the social identities of the community members, their community roles, and the relationships among them. Generally speaking, the experienced members of a teacher community of practice cultivate the novice members and provide them with guidance and assistance, resulting in a mentor-apprentice style of interaction. Admittedly, for novice teachers in the community of practice (student teachers), who

do not have much teaching experience, learning from more experienced colleagues (mentor teachers) and following the advice and suggestions are effective ways to develop teachers' professional knowledge and teaching skills. However, this also poses a number of challenges regarding teacher identities and role relationships:(1) The teacher identity and its interactive experiential behavior, formed by the social and cultural history, construct patterns of interaction in communities of practice, and such social interaction situations are regulated by the socio-emotional and discursive norms that are embedded in them, such as normalizing the teaching practice problems [1], avoiding disagreements [2], and face work [3],etc., have a potential tendency to inhibit the development of critical discourse, thus limiting pedagogical inquiry in the group [4] and reducing the effectiveness of learning in the teachers' community of practice. (2) The single-role relationship of mentor teachers guiding student teachers tends to lead to unbalanced power relations and hegemony of authority, resulting in rapid convergence of "brainstorming" discussions, thus inhibiting the production of diverse perspectives and deep pedagogical inquiry [5, 6].

Information and knowledge sharing in online communities are also influenced and guided by a small number of high-influencers, who tend to have more professional knowledge, higher social recognition, social responsibility and self-worth needs. Higher-influencers are more likely to express their own views, dominate the flow of information and knowledge in the online community of practice, and influence the others' views and opinions in the online community. As a result, members in the online community construct relationships through the information interaction network, and this network of interaction relationships also regulates and guides the information flow of members in the online community. In the online community of practice for teachers, the roles of

teachers constructed by their identities, qualifications, titles, etc. naturally form and distinguish the high and low informants in the online community, which influences the evolution of the network of teachers' interactions and shapes the flow of information and knowledge. In addition, when the community of practice goes to the online platform, the boundary of the community is gradually enlarged, and the objects of community interaction are also gradually "virtualized" and "unfamiliar", thus forming a "short and quick" interaction mode. The importance of teacher identities and roles is reinforced in the teacher online community of practice arena - the meanings that people attach to these identities and roles guide their interactions, and these interactions can be sustained in the short duration of the online community. Therefore, it is easy to see that the above two problems are reinforced and amplified in the teachers' online community of practice.

Based on this, the study examined the following two main questions in the interaction process of teachers' online communities of practice: (1) How do mentor teachers and student teachers construct power relations and authority in their interactions? (2) How do the power relations and authority of mentor teachers and student teachers influence inquiry and learning in teacher communities of practice? Focusing on the case of an online teacher practice group, this study observes and analyzes teacher discursive interactions in the practice group through the analytical perspectives of Goffman's sociology and sociolinguistics, and thus providing a new perspective and insight for teacher professional development and teacher training in an online teacher community of practice.

2. Literature Review

2.1. Inquiry-based dialogues in teachers' practice community

Teaching is a complex and uncertain practice, and in the face of this complexity and uncertainty, teachers need to broaden their intellectual horizons, update their knowledge structures, and continually improve their professionalism and teaching skills. Through productive teaching dialogues with colleagues on problems in classroom teaching practice, teachers can sharpen their sensitivity, enrich their teaching cognition, expand their knowledge and method, and enhance their judgment [7]. This productive pedagogical dialogue includes critical reflective conversations [1], confronting issues of practice in teachers' classrooms, and dialogic gestures of inquiry.

The outstanding teachers' practice community is characterized by inquiry-oriented dialogue [8, 9]. The highly reflective inquiry can promote teachers group to accurately identify problems in their teaching practice, increase their pedagogical sensitivity, deepen classroom understanding, enrich action, and improve judgment-all of which are necessary for engaging in complex teaching and learning [10]. all of which are necessary to for complex teaching work [10]. Collaborative inquiry provides teachers with opportunities for critical dialog, negotiation of ideas, and conflicting perspectives [11-13], in which groups of teachers share pedagogical questions, question assumptions, clarify their pedagogical reasoning and processes, and integrate specific questions of pedagogical practice with pedagogical goals and curriculum concepts [14, 15].

However, a large body of previous literature has shown that,

while inquisitive discourse is considered central to productive teacher group dialogue, it occurs relatively infrequently [1, 13, 16], which is mainly related to the power relations and authority under the construction of interpersonal interactions. Teachers need to break the interaction mode in the inherent teachers' practice community, avoid the halo effect of authority and identity weaving, develop a growth mindset, and truly become researchers and reflective practitioners of education and teaching.

2.2. Power relations and authority in teachers' practice community

In a community of practice, the teacher group consists of teachers with a variety of identities that are shaped by a number of factors, including official position, title, pedagogical expertise, disciplinary knowledge, and educational background [6]. The diversity of identities in a community of practice can benefit both the community and the individuals in the community [16]. Mentor teachers in communities of practice, with their wealth of teaching experience and expertise, can be of great help to the student teachers, for example helping them to quickly resolve problems in their teaching practice and to adapt to the working environment of teaching and learning. However, such socioculturally and power-constructed relationships may contribute to the formation of power relations and power hierarchies among groups of teachers, and such status gaps may constrain teachers' collaboration, thus limiting their deep learning [5, 17, 18]. For example, Gunn's study described an experienced teacher led the teachers in her community of practice in curriculum development in an authoritarian manner, which prevented the rest of the teachers from asking their pedagogical questions [17]. In a study by Vedder-Weiss, the researchers analyzed the impact of face work on teachers' opportunities for seminar learning and found that because one teacher set a "line" of "expert teachers modeling best practices" for herself, so that in order to maintain her 'line' during the discussion, the teacher spent a great deal of time doing face work, thus limiting the opportunities for teacher learning [19]. Similarly, Eshchar-Netz et al. focusing on seniority and status relationships in teacher practice, found that status in a teacher community of practice may intensify hierarchical relationships between teachers, leading to one-way, didactic relationships that limit learning for both novice and senior teachers [4].

3. Analytical Perspective

Power relations, authority, and the roles assumed by each participant can be fully reflected in the group dialog process. However, for the time being, most studies have analyzed the structure of dialogue interactions and interaction patterns in communities of practice, exploring the construction of roles characterized by interaction patterns, such as using social networks and social cognitive networks to discover the roles of leaders, core participants, intermediaries, and peripheral participants in a group, as well as the specific role division of tasks. However, analyzing on interaction patterns alone is not enough to deeply explore the power relations between participants, as sometimes non-participation can be a form of resistance under the support of high power [20]. Therefore, in order to explore the power relations under discourse interaction, it is necessary to identify and extract relevant discourse features based on the specific discourse content. For

example, Raymond et al. used the “question-limiting mode of response” in discourse as a symbol of social status representing high power [21]; Brown et al. coded the use of honorific behaviors between participants' conversations as a way of coding the group's relative social status [22]. And in the study of Eshchar-Netz, the number of discourse interruptions, the number of viewpoints challenged, and the rate of discourse in teacher conversations in a community of practice were used to determine possible power hierarchy relationships in that community of practice [4].

Cognitive and social factors coexist in the discourse, power relations and authority partly determine the way and content of the dialogue, and the way of dialogic interaction is also constantly constructing the current power relations, so the power relations and authority in interpersonal interaction is a dynamic process of change. Therefore, in order to deeply analyze the power relations and authority in the discursive interaction, it is necessary to enter into the current interactive situation from the perspectives of both the authority and the observer, and carefully ponder and analyze. Sociologist and sociolinguist Goffman has devoted his life to interpersonal interactions in daily life, exploring interpersonal dialogues in daily life from the perspective of social micro-analysis, and proposing the participation framework, footing and embedding as relevant concepts in interpersonal interaction analysis. As shown in Figure 1 below, Goffman analyzes interpersonal interactions by including all mutually perceivable people in the participation framework, and he believes that all people in the participation framework have their own participation roles. In order to analyze the participant roles within the participation framework in detail, Goffman rewrote and deconstructed the simple “listener” and “speaker” roles, conceptualizing them as “production format” and “reception format” respectively. The “output format” and

“reception format” are conceptualized as “output format” and “reception format” respectively. In the “production format”, according to the specific content of the discourse output, it can be categorized into the roles of “principal” and “author”. The roles of “principal” and “author” can be categorized according to the content of their specific outputs. The principal is responsible for the content of his/her own output, while the author is merely a rewriter of the content and is not responsible for the content of the discourse. In the receptive format, according to the target of discourse producers in the current participation framework, the roles of “addressed recipient” and “unaddressed recipient” are categorized. The addressed recipient is the main object of the message conveyed by the discourse producer, while the unaddressed recipient is the perceivable object that is unintentionally or intentionally marginalized by the discourse producer. “Footing” and “Embedding” are another key concept in Goffman's analysis of the content of interactive discourse. A “footing” reflects the position or stance of each participant in a participatory framework, and maps the roles and interactions of that participant in the participatory framework. “Embedding” is a quotation or restatement of the content of the discourse of a participant within the participatory framework. In fact, “Footing” and “Embedding” are often expressed through discourse production. The content of the discourse reflects the “Footing” of the self-role, i.e., he/she is responsible for the content of his/her own discourse with a certain standpoint of the self, while the author of the discourse repeats or rewrites the content of the discourse through “Embedding”, but does not take responsibility for the content. In a participatory framework, discursive roles are constantly shifting, either in the course of a person-to-person conversation or in a particular sentence by a particular person.

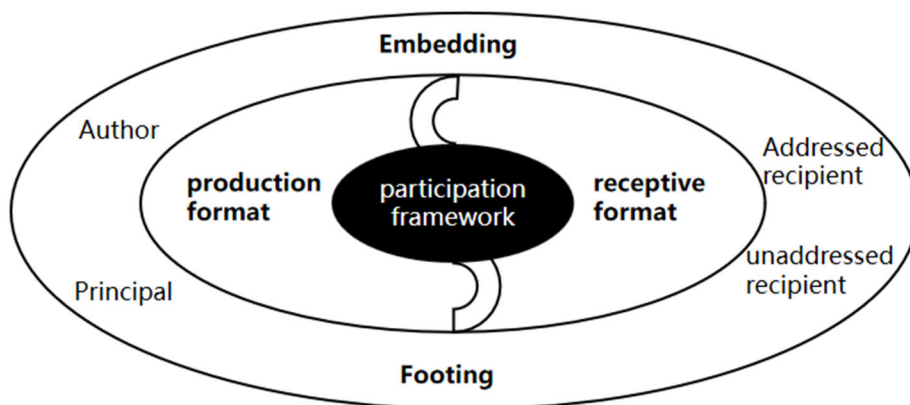


Figure 1. Goffman's concept of interaction analysis

By means of micro-ethnography, Eshchar-Netz explored how teachers in a teacher community of practice constructed power relations and hierarchies through discourse [4]. In their subsequent study, based on Goffman's micro-sociological perspective, they also analyzed the ways of constructing power relations and authority and the interactive embodiment of power relations and hierarchies in a teacher community of practice by using interactive information such as discourses, facial expressions, and gestures in a teacher community of practice, and constructed and analyzed power relations or hierarchies in the interactive discourses in a community of practice as follows:

1. High-powered people have an absolute right to interrupt

the discourse;

2. High-powered people have their own footing (usually constituted by the role or identity they assume in the community), and based on the footing, they act as their own discursive duty-bearers, taking responsibility for the content of their own discourse, e.g., if the discourse producer is the community coordinator, he or she will stand for coordinating the order of the team's interactions;

3. High-powered people may select designated listeners and marginalize low-powered people in the community, undermining the authority and legitimacy of low-powered people's participation;

4. Members of the community may reenact the content of

the discourse of a recognized authority in the community, i.e., act as the author of the authority's discourse, in order to increase the authority and credibility of their own discourse, and at the same time, further potentially enhance the authority of the re-actors through the identification of viewpoints;

Through the literature research, there are several insights as follows: first, dialogue is the main mode of interaction in teacher communities of practice, discourse is both the object and the mediator of learning. Through dialogue, the teacher group realizes the negotiation of meaning and the construction of knowledge. Especially in online teacher communities of practice, discourse conveys most of the information, which is enough to show the importance of discourse in teacher practice communities. Second, discourse reveals personal identity information in a more intuitive and explicit way, and this information constructs the group's interaction mode, thus forming corresponding power relations and authority, especially in the online teacher community of practice, where teachers' interactions are short-lived and limited by spatial distances, in order to obtain the basic information of the interaction object in a quick manner, the most efficient way is through discourse. Third, teachers' exploratory dialogues are the kind of dialogues that this study hopes for, and teachers' discourses become the direct object of this study.

According to Goffman's interpretation, any kind of real-time interpersonal interaction can be analyzed using the participation framework. The process of role switching between production and receptive format as well as footing shifting and embedding in the participation framework shapes and reflects power relations and positions of authority in the group. Specifically, who has the power to interrupt (others), i.e., to force the switching of one's receptive format to production format in the dialogic participatory framework. In what way was the interruption (of the others) made, i.e., what

was the footing (authority) of their production format? Was embedding (citation of authority) made? Who was interrupted by (others), i.e., forced to convert from production to receptive format. Is it forced to become a bystander, i.e., is it simply ignored or marginalized. Thus, Goffman's analytical perspectives on interpersonal interaction, such as the participation framework, footing, and embedding, are unique and relevant to the issues examined in this study.

In summary, based on Goffman's concepts related to micro-sociolinguistics, this study explores the process of power relations and authority formation in teachers' online community of practice and their impact on teachers' inquiry-based dialogues. Specifically, this study follows Goffman's framework of participation in that we selected a case study of a teacher practice group and placed the dialogic interactions of all teachers in the group into the framework of participation for consideration and analysis.

4. Research Design

4.1. Research Background

This study focuses on an online practice group composed of teachers with multiple role subjects. The practice group divide the teachers' participation roles into student teachers and mentor teachers based on each teacher's teaching age (teaching experience). The activity process of the practice group is shown in Figure 2 below. First, the student teacher uploads a video of his/her lesson example, which was listened to and evaluated by three mentor teachers who may come from different regions, subjects, and grades. Then, an online practice group of teacher is formed in the cloud for exchange and discussion, including commenting on the strengths, problems, and discussing solutions of the student teachers' lesson. Figure 3 below shows the interface of the teachers' online communication and discussion.

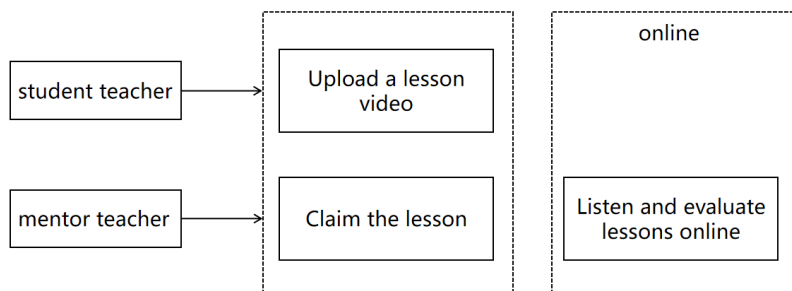


Figure 2. Process of teachers' online practice group activities

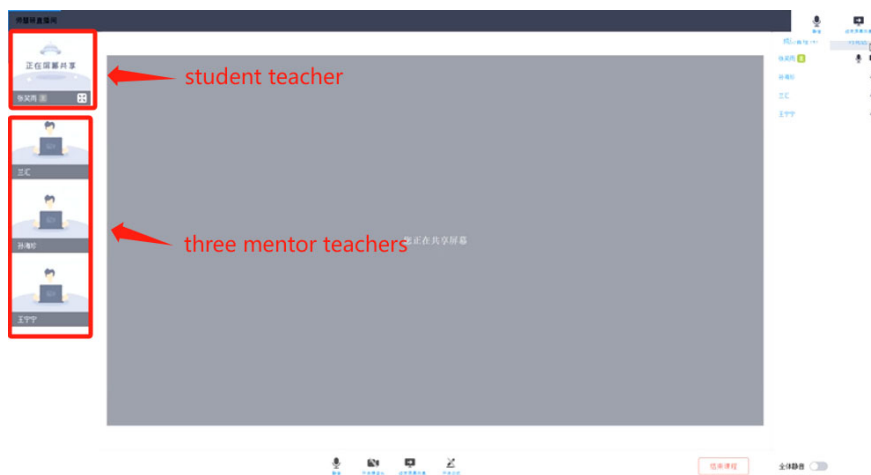


Figure 3. The interface of the teachers' online communication and discussion

4.2. Research Objects

The teacher community of practice in this study consists of four teachers from four different schools with different titles, designations, teaching experiences and teaching backgrounds, Table 1 below shows the basic information of the four teachers. Ms. Liang is the student teacher in this teacher practice community, serving as an elementary school mathematics and language teacher, as well as a second-grade

teacher, and Ms. Li, Ms. Kou, and Ms. Deng are the mentor teachers, among which Ms. Li is an elementary school language teacher, as well as a senior teacher, who also won the title of municipal backbone class teacher; Ms. Kou is a high school mathematics teacher, a senior teacher, and municipal subject leader; Ms. Deng, an elementary school Chinese teacher, is a first-grade teacher with no additional titles.

Table 1. Basic information about teachers in online practice groups

Teacher's name	Teaching subject	Teaching period	Length of teaching	Status	Title	Honorary title
Ms. Liang	Math, Chinese (class teacher)	Elementary school	15 years	Student Teacher	Second-grade teacher	None
Ms. Lee	Chinese(class teacher)	Elementary school	28 years	Mentor teacher	Senior teacher	Municipal backbone class teacher
Ms. Kou	Math	High school	31 years	Mentor teacher	Senior teacher	Municipal Subject Leader
Ms. Deng	Chinese(class teachers)	Elementary school	22 years	Mentor teacher	First-grade teacher	None

Note: The title rank: senior teacher, first-grade teacher, second-grade teacher (from high to low); None: do not have a honorary title.

In this teacher practice group, the student teacher, Ms. Liang, uploaded a video of a lesson on "Patriotic Education" for an elementary school class meeting. The three mentor teachers listened to and evaluated Ms. Liang's lesson before the start of the seminar, and then conducted a group consultative discussion on Ms. Liang's class meeting on the theme of "Patriotic Education" at the seminar.

In this study, the transcribed text of the online communication of this teacher practice group was used as the main source of research data, and a total of 5031s of discussion and communication data were obtained. In addition, late in this seminar, Ms. Li withdrew due to an event, taking this event as a demarcation point, before Ms. Li withdrew, a total of four people conducted a seminar communication, lasting 3902s. After Ms. Li's withdrawal, a total of three people (Ms. Liang, Ms. Kou and Ms. Deng) conducted the seminar and the length was 1129s.

The case was selected for the following considerations: First, the practice group was a small part of the community of practice, which allowed us to examine the discursive interactions of the teachers' community of practice from a more micro perspective; Secondly, the case was a seminar on a classroom lesson, which was mainly directed at the classroom teacher's professional fundamentals and pedagogical skills, and did not involve professional subject matter knowledge, and therefore we believed that the power relations and authority among the participating teachers should be not very prominent (for the class lesson, at least each participating teacher could say a few words), and it should be the case that the overall teaching and research atmosphere is more oriented towards the state of critical and reflective inquiry that is hoped for in this study. Again, it is further argued that if power relations and authority are found and constructed in the interactions in this case, they are more likely to be found in other professional disciplines, and therefore this case can be used as a case of the "greatest common denominator" of the research questions in this study.

4.3. Research Methods

Power relations and authority in interpersonal interactions can be reflected in dialogue, for example, Raymond and others used the "questioning-limiting responses" in discourse as a symbol of social status representing high power [21]; Brown et al. used honorifics to encode the group's relative social status in the dialogue [22]; In Eshchar-Netz's study, the number of interruptions, the number of challenges to ideas, and the rate of discourse in teacher conversations in a community of practice were used to determine the possible hierarchical power relationships [4].

Based on the above research, the study first judged the power relations and authority of this teacher online practice group by means of discourse measurement, coding the challenge (the number of times the teacher challenged another participant's idea), interruption (the number of times the teacher interrupted another speaker), interrupted (the number of times the teacher was interrupted), and the discourse rate (the percentage of the teacher's discourse) in the teacher seminar conversations of this teacher practice group. Subsequently, based on Goffman's sociolinguistic related concepts as an analytical perspective and framework for its detailed micro-analysis. Taking the selected case of teachers' online practice group in this study as the starting point, the paper makes a micro-analyze the power relations and the construction of authority in the teachers' online community of practice, as well as the impact it brings to the other members' participation and inquiry learning.

5. Identification and Formation of Power Relationships and Authority

5.1. Power relations based on discourse measurement

Table 2 below shows the rates of interrupting (other teachers), being interrupted by (other teachers), challenging

(other teachers' viewpoints), and discourse by each of the teachers in this teacher community of practice. As can be seen from the table, the three mentor teachers interrupted (other teachers) at a higher rate than all of the learner teachers interrupted (other teachers), with Ms. Kou interrupting the other teachers at the highest rate, which indicates that Ms. Kou often interjected directly during conversations to express his own point of view or to challenge the point of view of others. According to Eshchar-Netz's, in the process of group interaction, the degree of active interruption of discourse has a certain correlation with its power status in the group, therefore, it can be seen that the mentor teacher Kou has a greater power advantage in the teachers' dialogues [4]. In terms of the rate of interruptions (by other teachers), the rate of student teacher Ms. Liang is higher and Ms. Kou is relatively lower, which indicates that the student teacher Ms. Liang was often interrupted by other teachers during the dialogues, while the opposite was true for Mr. Kou. Therefore,

it can be seen that the student teacher Ms. Liang was in a weaker state under the dialogical situation, which also further reflects Mr. Kou's "dominant" status. In terms of challenges (other teachers' viewpoints), the proportion of the four teachers is close to each other and low, while the mentor teacher Li and Kou are slightly higher than the other teachers, which indicates that the teachers have less critical inquiry posture in this seminar dialogue, and tend to agree on a "peace" dialogue on the whole. And teachers Kou and Li, with their dominant status in the dialogic situation (the role of mentor), were the main sources of questioning and challenging others' views. In terms of teachers' discourse rates, both before and after Ms. Li's withdrawal, the mentor Ms. Kou's rate of discourse always took precedence, and even after Ms. Li's withdrawal, the rate of discourse accounted for half of all teachers' discourse (51%), which showed her dominant position.

Table 2. Power relations based on discourse measures

	Interruption	Being interrupted	Challenge	Discourse rate (before Ms Li's exit)	Discourse rate (after Ms. Li's exit)
Ms. Liang	9%	40%	17%	21%	20%
Ms. Lee	21%	21%	21%	25%	0%
Ms. Kou	42%	14%	21%	36%	51%
Ms. Deng	20%	23%	16%	18%	29%

5.2. Power relations and construction of authority

5.2.1. Authority "establishment" - determining the footing of guidance

As mentioned earlier, high-powered people will have their own discursive footing, based on which they are responsible for the content of their discourse [4]. From the basic information (teaching experience, title and honor title) of the three mentors, it can be concluded that among the three mentors, Ms. Li is the most "qualified to guide" teacher -- with many years of experience as an elementary school class teacher, and the title of municipal backbone class teacher--as one of the most recognized authorities in the teacher community of practice, it is self-evident that Ms. Li's mentoring is based on her teaching experience as a class teacher.

Ms. Li: In fact, our class teacher to do this ideological education work, honestly is a humble work, but I think you I think it is a very good way.

.....

Ms. Li: I think this can be a try, because in fact, I have tried, I think..... of course, I'm a personal idea.

As shown in the above discourse fragment, Ms. Li has many years of teaching experience as an elementary school class teacher, and has also been awarded the honorary title of municipal backbone classroom teacher, which can be felt in Ms. Li's discourse as a full embodiment of the footing. First, Ms. Li mentioned her own thoughts and experiences of working as a class teacher, then further discussed them in terms of her own class teacher's teaching experience, and finally Ms. Li "gives up" her own footing, indicating that it is merely an idea of her own. It indicated that Ms. Li did not take her role as an expert consistently, but set up two footing: one as a professional authority on tutoring teachers, and the other from the standpoint of discussing with Ms. Liang, rather

than guiding her completely, and combining her own teaching experience as a teacher with that of the trainee teachers. teacher's teaching experience, and negotiating the most effective teaching strategies with the student teacher, as a collaborator as well as a co-negotiator. This can also be reflected in Table 2, where Ms. Li, who is the "most qualified to guide", is not as high as Ms. Kou in terms of power level (discourse interruption).

In contrast, Ms. Kou, although the oldest of the three mentors, was a high school math teacher, and Ms. Deng, although an elementary school class teacher, had relatively little teaching experience compared to the other mentors. In order to determine their mentoring status, they also constructed appropriate mentoring footings for themselves.

Ms. Kou: I am the instructor of our Fengtai District Classroom Teacher Basic Skills Competition every time. I'll talk about it specifically from the perspective of participating in the Class Teacher Basic Skills Competition.

Mr. Deng: When I myself was a participant or instructor in this competition for classroom teachers' basic skills

Both teachers' discourses mentioned that they had been instructors for the Class Teacher Basic Skills Competition, thus using this as their instructional footings, as well as establishing their position of authority.

5.2.2. Power "elevation" - the result of discursive re-enactment

Members of the community may reenact the content of the discourse of a recognized authority in the community, i.e., as the author of the authority's discourse, as a way of increasing the authority and credibility of their own discourse, while further potentially enhancing the authority of the subject of the reenactment through the identification of viewpoints.

During the course of the seminar, although Ms. Kou interrupted Ms. Liang's words several times, she acted as the author of Ms. Li's words several times in the way she

produced her discourse, re-enacting what Ms. Li had said.

Ms. Kou: Ms. Liang, you have no problem with that video, there is more time in this class I think that video needs to be simplified a little bit, didn't Mr. Li say that earlier?

Ms. Kou: What Mr. Li said, you can give the students, together, a picture to design.

Ms. Deng: I can see what Mr. Li is saying, that is, he just thinks that since you can't say anything back there, you need to simplify it a little bit, right?

From the other tutors' discourse reenactments of Ms. Li, it was clear that Ms. Li was still a "recognized" professional authority. In addition, Holesms noted that whether the leading teacher was eliciting information, challenging ideas, or stimulating thinking, she influenced the behavior of other participants [23]. The study found that most of the participants' concerns and main topics of deliberation were elicited and stimulated by Ms. Li when she was still present, which can further illustrate her potential leadership position. Therefore, it can be concluded that although Ms. Li's power level in the community of practice did not seem to be as high as Ms. Kou's in terms of discourse-measured power relations, but in reality, the leader and controller of the topic discussion in the community of practice was still Ms. Li, while Ms. Kou mainly acted as the author of Ms. Li's discourse in the repetition and restatement of her discourse.

5.2.3. Power "support" - the setting of the addressed recipient

High-powered people may select addressed recipient to marginalize low-powered people in the community, undermining the authority and legitimacy of low-powered people's participation, thus enabling "support" of power among high-powered people.

From Table 2, it can be seen that after Ms. Li left the stage, Ms. Kou's discourse rate occupied half of the overall discourse and was in a position of absolute power, and in the course of the three-member conversation, Ms. Kou also repeatedly marginalized Ms. Liang by placing her in the position of an unaddressed recipient.

Ms. Liang: Is it drawn in class?

Ms. Kou: Drawing in class ah, is that what Ms. Deng means? [For the first time, Ms. Liang as an unaddressed recipient]

Ms. Deng: I think it's okay, there are some you can draw ahead of time, like the development of the ancient canal, but in the future, you can draw on the spot.

Ms. Kou: Yeah, you give him a piece of paper, Ms. Deng, is that how you envisioned it? I think the picture is very strong. [For the second time, Ms. Liang as an unaddressed recipient]

Ms. Deng: Yeah, yeah, Ms. Kou got me.

Ms. Kou: You see in the video, some of the students are up there and the ones below them are not listening properly.

Ms. Liang: What about home now?

Ms. Kou: The current hometown is for him to draw Isn't it Ms. Deng, the current canal for him to draw on the spot and speak after drawing. [For the third time, Ms. Liang as an unaddressed recipient]

As shown in the above dialog clip, the three teachers discussed whether students should draw ancient, present, and future canals in class. The teachers deliberated on which panel needed to be completed by students before class, taking into account the time constraints. During the discussion, Ms. Liang questioned the suggestions made by the two tutors and asked for their views and opinions, while the two tutors negotiated and shared with each other in the process of

presenting their own viewpoints, treating each other as the addressed recipient, had three times treated Ms. Liang as an unaddressed recipient, and even directly marginalized the student teacher, Ms. Liang, in the later conversations.

It is worth noting that both the embedding between tutors and the negotiation of sharing and supporting each other are ways in which tutors support and reinforce each other's power and authority.

To summarize, this study analyzes the power relations and authority in the interactive discourse of the teacher's online practice communities based on discourse metrics-related analysis methods and the related concepts of Goffman's participation frame, footing, and embedding, and based on the discourse metrics-based analysis, it was found that Teacher Kou in the case of this study was the power supreme, followed by Teachers Li and Deng, and lastly by the student teacher, Teacher Liang. Subsequently, based on the relevant concepts of Goffman's micro-sociolinguistics, the ways of constructing power in this teacher's online practice group were analyzed, and it was found that, firstly, the high-powered people all have their own discursive footings (which are usually constituted by the roles or identities that they have assumed in their communities), and based on the footings, they act as their own discursive duty-bearers for their discursive contents. Secondly, those with high power may select designated listeners to marginalize those with low power in the community, undermining the authority and legitimacy of those with low power to participate, while achieving mutual "support" among those with high power. Third, members of the community may reenact the discourse content of the recognized authority in the community, i.e., acting as the author of the authority's discourse, in order to increase the authority and credibility of their own discourse, and at the same time potentially enhance the authority of the reenactor through the recognition of their point of view. The analytic findings of this study echo those of Eshchar-Netz et al.'s research on teacher communities of practice, where Eshchar-Netz also describes a community of practice in which there is a distinct hierarchy of power, consisting of multiple mentor teachers and a trainee teacher, in which mentor teachers construct each other as partners in decision-making, and in which they use the trainee teacher as the designated listener, their tone is decisive, while when confronted by the mentor teacher, their tone shifts to one of polite inquiry [4]. Eshchar-Netz suggested that this may be out of respect for the other mentor teachers or out of a desire to gain buy-in and come to an agreement, which may intentionally or unintentionally ignore or marginalize the trainee teacher in the process, diminishing the trainee teacher's ability to participate in the discussion with authority and legitimacy.

6. The Impact of Power Relations and Authority on Teachers' Communities of Practice for Inquiry and Learning

Teacher learning in productive communities of practice requires the construction of "critical collegiality," which entails critiquing, questioning, challenging, and confronting opposing ideas and disagreements with competing viewpoints [12, 24], as well as an inquisitive posture that can facilitate careful consideration of the various antecedents, implications, and possibilities for action in the phenomenon of teaching and learning [25]. However, power relations and authority in a

teacher's community of practice may inhibit a critical reflective inquiry stance to some extent. In the case of this study, it finds that power relations and authority in a teacher community of practice may cause the following two adverse effects: one is the dominant discussion of "one party is dominant", resulting in superficial discussion of problems; the other is the power sharing support of "harmonious", which disintegrates the deep connotation of negotiate inquiry.

6.1. "One party dominant" - resulting a superficial exploration of the issues

As the discourse measurement analysis in Table 2 shows, Ms. Kou was the "formally" high-powered person with the highest discourse rate in this study's teacher community of practice, probably because she was the oldest in the community of practice and had taught for the longest period of time, and the other tutors gave her a certain amount of respect. Before the seminar began, she identified herself as the instructor of the Class Teacher Skills Competition, and in the rest of the seminar, she gave her advice and opinions from the perspective of the Skills Competition. With Ms. Kou's rather didactic intervention, the participation framework of the moment was reshaped - turning the collaborative exploration into a lesson, as shown in the following clip.

Ms. Kou: First of all, Ms. Liang I ask you what is that topic of yours?

Ms. Liang: My title is Painter's Country in Canal Love.

Ms. Kou: What do you think is the word at the center of your topic?

Ms. Liang: The painting of the painting.

Ms. Kou: Right, which means then your whole class meeting, the painting is the main line, it's the dominant one, what's the painting about?

Ms. Liang: The painting is of the hometown.

Ms. Kou: What was your purpose there? Why did you draw it?

Ms. Liang: Love your hometown.

Ms. Kou: What's the point of loving your hometown?

Ms. Liang: And thus love the motherland.

.....

Ms. Kou asked a number of questions and referred to the student teacher, Ms. Liang, as the designated listener, but her question was a didactic, known-information question [26], motivated not by curiosity or the expectation of eliciting inquiry, but rather by the fact that she treated Ms. Liang as her own student and wished to mentor the teacher. There is no doubt that Ms. Kou's didactic phrasing of the question did not elicit inquiry, but only a simple response from Ms. Liang.

In addition, Ms. Kou set herself up as the instructor of the Class Teacher Skills Competition, so she began the discussion by asking Ms. Liang to refine and revise the text of the instructional design according to the framework of the instructional design of the Class Teacher Skills Competition, without giving effective suggestions from the actual teaching practice problems that appeared in Ms. Liang's instructional video. When Ms. Li was present, the seminar mainly centered on Mr. Li's suggestions for teaching improvement, and Ms. Kou's issue of teaching design writing was not taken seriously. However, after Mr. Li left the seminar, Ms. Kou, who was in an absolute position, brought the issue of teaching design writing to the stage, thus blocking the ongoing in-depth seminar.

Table 3 below shows the introduction of topics by Ms. Li and Ms. Kou and the duration of the discussion. Ms. Li, as the first teacher to comment on the lesson, mainly gave suggestions on actual teaching practice and introduced the topic of "various forms of activities" into the discussion, and then Ms. Kou introduced the topic of "revising and improving the framework of teaching design" into the discussion in response to the problem of writing the teaching design. Ms. Kou then introduced the topic of "modifying and improving the framework of teaching design" to the discussion of the problem of writing the teaching design. From the duration of the discussion, Ms. Li's "various forms of activities" took up most of the discussion time, and after Ms. Li left the chatting room, Ms. Kou introduced the topic of "modifying and improving the framework of teaching design" to the discussion.

Table 3. Topic introduction and duration

Seminar Topics	Topics introduced to teachers	Seminar duration (time period)
Various forms of activities	Ms. Li	05:13-17:52
Revise and refine the instructional design framework	Ms. Kou	19:38-22:23
Various forms of activities	Ms. Li	27:31-39:05
Various forms of activities	Ms. Li	51:04-59:28 (departure)
Revise and refine the instructional design framework	Ms. Kou	01:00:39-01:02:33

Ms. Li: Name your hometown, andthen present your hometown. The video is a little shorter. [Ms. Li exits]

Ms. Liang: Then I will change my video again, right? Two teachers.

Ms. Kou: [Ignore] This is a very good idea of yours. Ms. Deng gave you the framework of the competition, so if it's convenient, Mr. Liang can write it accordingly first. Run through the ideas, and then delete a certain part. Find the highlights.

The transcribed text above took place after Ms. Li's departure. Before Ms. Li's departure, the four teachers were engaged in a conversation around the question, "The video in the classroom is too long, do we need to delete it?"-a question

posed by Ms. Li-and after Ms. Li's departure, Ms. Liang, a novice teacher, attempted to continue the reflective inquiry by withdrawing from the participation framework, which resulted in the termination of the reflective inquiry. However, Ms. Kou, as the instructor of the Class Teacher Basic Skills Competition, ignored Ms. Liang's further questioning and again focused the discussion on the writing of Ms. Liang's instructional design, which was a consistent dialogical footing for the instructor of the Class Teacher Basic Skills Competition, resulting in a superficial exploration of the issue.

In this study, Ms. Kou always maintained the authority of the instructor of the Class Teacher Skills Competition and made the guidance consistent. However, on the one hand, although Ms. Kou, the mentor teacher, gave insights and

evaluations from the perspective of the class teacher skills competition and asked Ms. Liang to revise and improve the textual content of the instructional design, it was obvious that what mattered to Ms. Liang was how the teaching practice was implemented and operated, and the mismatch of supply and demand between the student teachers and the mentor teachers resulted in an inefficient input; on the other hand, the "one-dimensional" knowledge transmission also inhibited the exchange of views and collision of ideas among teachers, limiting the presentation of the wisdom of each subject teacher.

6.2. "Harmony" - dismantling the deep-rooted connotations of the negotiation

From the discourse measures in Table 2, it can be seen that teachers in this community of practice did not challenge each other's viewpoints too much, which indicates that the degree of critical scrutiny of each other's viewpoints was relatively light in the process of teachers' interactions, and that the overall tendency was towards a quick "peacemaking" situation. From Table 2, we can find that after Ms. Li left the stage, Ms. Kou occupied the main position, and as mentioned earlier, Ms. Kou set up a footing as the instructor of the Class Teacher Basic Skills Competition from the very beginning, so when Ms. Li left the stage, Ms. Kou brought the topic of "modifying and improving the instructional design framework" back to the center of the discussion. And in the three-person discussion, 33% of the time was spent on the topic of "revising and improving the instructional design framework". In fact, as a student teacher, Ms. Liang was most concerned about improving his own teaching practice, and hoped that the tutors could ask questions directly from the teaching videos she uploaded and give improvement measures.

Ms. Kou: Yes, you won't be wasting this session, you can put it in the pre-session preparation, you put these sessions after or before the class, you'll have a particularly full class

Ms. Deng: I also think that you must write according to that framework is because you don't have a detailed instructional design Like Ms. Kou said, which one of you is the highlight, which one of you stays and which one of you deletes, you have to base it on your intention, right?

Ms. Liang: (silent)

As shown in the above discourse fragment, the student teacher, Ms. Liang, felt that it would be clearer and more intuitive to watch the video directly. In the face of the mentor teacher, Ms. Kou, who suggested "revising and perfecting the framework of the instructional design", Ms. Liang also responded that she had a comprehensive instructional design, but it was just that she hadn't uploaded it onto the online platform, and she thought that it would be clearer and more intuitive for the mentor teacher to watch the instructional video directly. Subsequently, Ms. Deng, another tutor in the chatting room, "echoed" Ms. Kou's suggestion, probably out of respect for Ms. Kou, to maintain her authority as a tutor as well as to save her face, and also supported "revising and perfecting the framework of the instructional design". Because of the shared viewpoints of the two tutors, silence became the primary choice of the student teacher, Mr. Liang.

In fact, face-saving is indispensable in interpersonal interactions, and correctly and appropriately conducted face-saving has a positive effect on maintaining a favorable climate of inquiry in a community of practice for teachers [19].

However, excessive attempts to avoid conflict, maintain friendly relations among members of the community of teachers, and create "a harmonious atmosphere" will inevitably cover up and avoid the actual pedagogical problems that really need to be explored and solved, and gradually disintegrate the substantive meaning and deeper connotation of negotiated commonality.

In addition, as mentioned in the previous section, Ms. Kou had marginalized Ms. Liang on three occasions, while Ms. Kou and Ms. Deng stood in the instructor's position of acting as each other's designated listeners, agreeing on a conceived vision of the teaching practice, while totally disregarding the ideas and questions of Ms. Liang, who was the actual teaching teacher. Undoubtedly, this culture of mutual agreement and unanimity will resist the emergence of diversified and differentiated perspectives, and will discourage the vitality and motivation of other teachers' seminars, not to mention appreciative evaluations laced with falsehoods. In the long run, it will inevitably distort and alienate the original mission of the culture of teacher education and research, and erode the true value of the existence of a community of practice for teachers.

7. Implications for Online Communities of Practice for Teachers

7.1. Seeking the democratic authority in communities of practice for teachers - the inherent tension of "blossoming"

Like any social group, interaction in a teacher community of practice is a socialized interaction, and from Goffman's micro-sociolinguistic perspective of interaction in a teacher community of practice, power relations and authority among teachers (e.g., status, professional knowledge, teaching experience, title, or honorary title, etc.) are intrinsic motivators that drive negotiated exchanges between teachers and are externally manifested in the community of practice's interactive participation framework. Such power relations and authority are not set in stone, but are constantly and dynamically changing in response to interactions. However, it is worthwhile to be wary of whether the participation framework constructed by the interaction remains appropriate to the reality of the development of the interaction. In other words, when a factor that constitutes a qualification of authority limits deeper inquiry among teachers, can one choose the factor of authority that guides the deeper inquiry and is in line with the current interactive development [27]. In the case of this study, all three teachers had their own footings and certain authoritative factors present: teacher Li had extensive class teaching experience and expertise, teacher Kou and Deng had served as mentors for the class skills competition, and teacher Liang was most familiar with the classroom and students. Ms. Li gave corresponding teaching improvement and optimization measures based on her own footing or authority, while also taking into account Ms. Liang's difficulties and problems in the implementation of actual teaching practice, giving Ms. Liang the opportunity to articulate her questions and confusions based on her own teaching practice. The two authoritative factors constitute the inherent tension of the situation, while the subject of the authority upholds the principle of interactive dialogue on an equal footing, which embodies the democratic authority of the

community of practice of teachers. The authoritative subject upholds the principle of interactive dialog in an egalitarian manner, which embodies the democratic authority of the teacher's community of practice, and essentially promotes an in-depth and sustained inquiry dialog. On the other hand, although Ms. Kou gave insights and evaluations from the perspective of the Class Teacher Skills Competition and asked Ms. Liang to revise and improve the textual content of the teaching design, it was obvious that the most important thing for Ms. Liang was how the teaching practice was implemented and operated. However, in the process of the dialogue, Ms. Kou consistently adhered to the authority of the instructor of the Class Teacher Skills Competition, giving her guidance in a consistent way. Truijen and Datnow mentioned that one of the prerequisites for promoting effective collaboration among teacher groups is the promotion of the teacher's ability to work together [28, 29]. One of the prerequisites for effective collaboration is a climate of mutual support, thus preventing the move towards collaborative interactions under power relations and hierarchies in order to increase the sense of group efficacy. Similarly, Louws mentions the need to give some professional autonomy to teachers involved in group collaboration to facilitate the participation of group teachers. In conclusion, an interactive atmosphere of trust, mutual respect, and interdependence in a community of practice for teachers is a prerequisite for inquiry and learning, which can prompt more active and effective participation of teachers and make the wisdom to present itself [30].

7.2. Managing roles and identities in teachers' communities of practice - the coexistence of "critique" and "appreciation"

In teacher communities of practice, especially in communities of practice where there are clear identities and roles for mentor and student teachers, it is easy to create an "imbalance" in power relations between mentors and apprentices, so flexible and diverse community roles and identities are necessary. On the one hand, teachers in a community of practice need to have a correct self-perception of their roles and identities, and to dynamically set up and maintain effective roles and identities based on the current context and the target audience in their interactions. For novice teachers, they are usually the learners in the community of practice. They need to pay attention to their own immediate problems in practice, dare to express their views and ideas in an appropriate way in the community of practice, and question and criticize the views put forward by the mentor teacher. In this study, the student teacher, Ms. Liang, faced with the suggestions for teaching improvement from the mentor teachers, did not accept them in a wholesale and passive way, but put forward her own doubts in the light of her own professional knowledge, the students' prior knowledge, teaching facilities, etc., and problematized the suggestions in terms of the implementation of the actual teaching practice. This way mutual questioning, testing and revising of the viewpoints, so as to achieve a higher degree of consistency and sharing. This is also reflected in Table 2, where in the face of suggestions from the tutor that may not be very suitable for her teaching, Ms. Ling was able to interrupt the conversation and raise her own doubts. For mentor teachers, they not only need to provide novice teachers with space to ask questions, but also need to be able to guide thinking, facilitate critical dialogues between

teachers, and create a good interactive atmosphere. In this study, "the most qualified teacher" Ms. Li has many years of teaching experience as a class teacher, when giving advice to the student teacher, Ms. Liang, can reason rationally with her own professional knowledge and teaching experience and give appropriate optimization suggestions. At the same time, Ms. Li also acted as an equal collaborator to discuss the feasibility of the advice with Ms. Liang, who was a teaching teacher, which facilitated the collision of ideas and negotiation of meanings among each other.

On the other hand, the specific role of the facilitator, moderator, or organizer in a group dialogue can also play a key role in the dialogue in the community. Conley argues that one of the criteria for effective collaboration is a group task management strategy, whereby the group dialogue is oriented towards the group's goals [31]. The importance of a trained facilitator in group dialogues is emphasized by Knuth in *Mapping Dialogue: A Vital Tool for Social Change*, where the facilitator can make it "safe" for opposing viewpoints to be expressed, promote diversity of viewpoints, and create an atmosphere of inquiry. The facilitator can also guide the group conversation so that it centers on the goal. In teacher community of practice dialogues, some researchers also support the role of the facilitator in guiding the dialogues and creating an atmosphere in which feedback from the facilitator can be used to realize the coexistence of "critical" and "appreciative" inquiry and reflective dialogues in the teacher community of practice [7].

7.3. Highlighting the nature of technology in online communities of practice for teachers - realize sharing and creating of knowledge

With the development of network technology, online communities of practice for teachers are rewriting and reshaping the community of practice in an innovative and shared way - a professional interest group that spans and covers the school system, with the overall value orientation of teachers' professional development, and with a variety of ways to flexibly open up the channels of teachers' connection, forming a two-way closed loop between teachers' workplaces and professional learning places. However, in the network environment, it is not difficult to find that many sources of identity information, many carriers (or "symbolic media") that can convey information have become important - due to the spatial virtuality and strangeness of the network, people can only understand the interactive objects through these explicit symbols and the meanings they carry. Because of the spatial virtuality and strangeness of the network, people can only understand the interacting objects and behave appropriately through these explicit symbols and the meanings they carry. What we are calling for, however, is that the authority woven by identities and roles in online communities of practice for teachers needs to be broken down, with participating teachers engaging in collaborative inquiry, free and equal expression of their views and insights around authentic issues of pedagogical practice. The technological nature of the Teacher Online Community of Practice is highlighted, where each teacher is both a learner and a producer of knowledge. The online community of practice environment for teachers provides a space for novice teachers to develop professionally and buffer their careers, and at the same time provides a platform for teachers with certain teaching experience and specialties to display themselves and

disseminate their wisdom [32]. In addition, in the face of increasingly complex educational and teaching environments, teachers need to have a sense of lifelong learning and a posture of learning to keep up with the times, and at the same time, teachers are faced with the challenge of expanding and optimizing the structure of their professional knowledge, which requires teachers to be good researchers and reflective practitioners in education and teaching, and need to look at, observe, and analyze teaching from a different angle and perspective. The online community of practice for teachers connects a wider range of teachers' exchanges, enables the sharing and creation of knowledge, and becomes a source of professional knowledge creation for teachers and an asset for the organization.

Based on a case study of an online practice group consisting of four teachers, this study explores the power relations and authority in an online community of practice for teachers through the analytical lens of Goffman's microsociology. The study mainly utilized Goffman's concepts related to participation framework, embedding, and footing, which makes the results of the study may share a certain theoretical bias to the extent that we may have overlooked other important factors hidden outside the theory. Second, we selected and studied the case of one online practice group, while it is not yet known how power relations and authority and how they are constructed in other online practice groups, and whether they are consistent with the findings of this study. Third, this study did not take into account the differences between disciplines and the composition of participating teachers, and the differences between disciplines and participating teachers may also have influenced the findings. Finally, our study case was a discussion conducted by four teachers for a classroom lesson, and different disciplines, different participating teacher staff compositions, and more other factors were not included in the examination, which is a space that can be further explored in subsequent studies.

Acknowledgment

The project "Case Study on the Deep Integration of Information Technology and Education and Teaching" was funded by the Basic Research Fund of the Education Technology and Resource Development Center of the Ministry of Education in 2022 (Project number :KJY202206);

References

- [1] Horn, I. S., Garner, B., Kane, B. D., & Brasel, J. (2017). A taxonomy of instructional learning opportunities in teachers' workgroup conversations. *Journal of teacher education*, 68(1), 41-54.
- [2] Hargreaves, A. (1991). Contrived collegiality: The micropolitics of teacher collaboration. *The politics of life in schools: Power, conflict, and cooperation*, 46-72.
- [3] Goffman, E. (1955). On face-work: an analysis of ritual elements in social interaction. *Psychiatry*, 18(3), 213-231.
- [4] Eshchar-Netz, L., Vedder-Weiss, D., & Lefstein, A. (2022). Status and inquiry in teacher communities. *Teaching and Teacher Education*, 109, 103524.
- [5] Liu, Y. (2013). The social organisation of talk-in-interaction at work in a language teacher professional community. *Learning, Culture and Social Interaction*, 2(3), 195-207.
- [6] Sutton, P. S., & Shouse, A. W. (2019). Investigating the role of social status in teacher collaborative groups. *Journal of teacher education*, 70(4), 347-359.
- [7] Lefstein, A., Louie, N., Segal, A., & Becher, A. (2020). Taking stock of research on teacher collaborative discourse: theory and method in a nascent field. *Teaching and Teacher Education*, 88, 102954.
- [8] McLaughlin, M. W., & Talbert, J. E. (2001). *Professional communities and the work of high school teaching*. University of Chicago Press.
- [9] Slavitt, D., Nelson, T. H., & Deuel, A. (2013). Teacher groups' conceptions and uses of student-learning data. *Journal of Teacher Education*, 64(1), 8-21.
- [10] Lefstein, A., & Snell, J. (2013). *Better than best practice: developing teaching and learning through dialogue*. Routledge.
- [11] Finkelstein, C., Jaber, L. Z., & Dini, V. (2019). "Do I feel threatened? No... I'm learning!"-Affective and relational dynamics in science professional development. *Science Education*, 103(2), 338-361.
- [12] Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. *Teachers College Record*, 103(6), 942-1012. Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. *Teachers College Record*, 103(6), 942-1012.
- [13] Popp, J. S., & Goldman, S. R. (2016). Knowledge building in teacher professional learning communities: focus of meeting matters. *Teaching and Teacher Education*, 59, 347-359.
- [14] Lefstein, A., Vedder-Weiss, D., & Segal, A. (2020). Relocating research on teacher learning: Toward pedagogically productive talk. *Educational Researcher*, 49(5), 360-368.
- [15] Cochran-Smith, M., & Lytle, S. L. (1999). Chapter 8: Relationships of knowledge and practice: teacher learning in communities. *Review of Research in Education*, 24(1), 249-305.
- [16] Horn, I. S., & Little, J. W. (2010). Attending to problems of practice: routes and resources for professional learning in teachers' workplace interactions. *American Educational Research Journal*, 47(1), 181-217.
- [17] Gunn, J. H., & King, M. B. (2003). Trouble in paradise: Power, conflict, and community in an interdisciplinary teaching team. *Urban Education*, 38(2), 173-195.
- [18] Nordstrom, J. (2020). Teaching in the periphery: Teacher identity in community language schools. *Teaching and Teacher Education*, 96, 103192.
- [19] Vedder-Weiss D., Segal A., Lefstein A. Teacher Face-Work in Discussions of Video-Recorded Classroom Practice: Constraining or Catalyzing Opportunities to Learn?[J]. *Journal of Teacher Education*, 2019, 70(5):538-551. DOI:10.1177/0022487119841895.
- [20] Lumby, J. (2019). Distributed leadership and bureaucracy. *Educational Management Administration & Leadership*, 47(1), 5-19.
- [21] Raymond, G. (2003). Grammar and social organization: Yes/no interrogatives and the structure of responding. *American Sociological Review*, 939-967.
- [22] Brown, P., Levinson, S. C., & Levinson, S. C. (1987). *Politeness: some universals in language usage* (Vol. 4). Cambridge University Press.
- [23] Holmes, J., & Chiles, T. (2010). Is that right?" questions and questioning as control devices in the Workplace. why do you ask, 187-210.
- [24] Wilson, S. M., & Berne, J. (1999). Chapter 6: Teacher learning and the acquisition of professional knowledge: an examination

- of research on contemporary professional development. *Review of research in education*, 24(1), 173-209.
- [25] Sherin, M. G., & Han, S. Y. (2004). Teacher learning in the context of a video club. *teaching and teacher education*, 20(2), 163-183.
- [26] Mehan H .*Learning Lessons: The Social Organization of Classroom Behavior*[M]. 1979.
- [27] Vangrieken K , Dochy F , Raes E ,et al.*Teacher collaboration: A systematic review*[J].*Educational Research Review*, 2015, 15:17-40.DOI:10.1016/j.edurev.2015.04.002.
- [28] Truijen K J P , Slegers P J C , Meelissen M R M ,et al.*What makes teacher teams in a vocational education context effective? A qualitative study of managers' view on team working*[J].*Journal of Workplace Learning*, 2013, 25(1):58-73.DOI:10.1108/13665621311288485.
- [29] Datnow A .*The Sustainability of Externally Developed School Reforms in Changing District and State Contexts*[J].*Ediciones El País*, 2011.
- [30] Louws M L , Meirink J A , Veen K V ,et al.*Teachers' self-directed learning and teaching experience: What, how, and why teachers want to learn*[J].*Teaching & Teacher Education*, 2017, 66:171-183.DOI:10.1016/j.tate.2017.04.004.
- [31] Conley K .*Sine Qua Non: Indispensable Resources for Ed Tech Professionals. Part 2: Leadership.*[J].*Learning & Leading with Technology*, 2004, 31:10-13.
- [32] Main,Mary.*Cross-Cultural Studies of Attachment Organization: Recent Studies, Changing Methodologies, and the Concept of Conditional Strategies*[J].*Human Development*, 2010, 33(1):48-61.DOI:10.1159/000276502.