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Teachers' Reflective Experience Through Classroom Video Observation

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Abstract: During the pandemic, online classes were held around the world, which facilitated access to observe teaching practices. This is a relevant experience, since there are few reflective instances in schools, even though public education policy emphasizes reflective practice in the professional development of teachers. In this regard, the observation of videos shows high reflective potential, helping to problematize and analyze teaching. This research sought to describe the functions and experience of classroom video observation with a reflective approach of teachers from four educational schools in the city of Concepción, Chile. The approach was interpretative, an instrumental case study design, with nine participants, selected by a maximum variation sampling and safeguarding ethical criteria. In-depth interviews were conducted and subjected to content analysis. The results showed three functions of the video observation, one instrumental and two others of reflective approach. In addition, the video observation was recognized as a reflective experience that facilitates the reconsidering of teaching performance, renewing practices, and developing reflective habits; also, facilitating and hindering elements were found in the video observation. It is concluded that the functions and experience of video observation could improve and professionalize teaching, based on the awareness and understanding of practice.

Keywords: *Practical knowledge, professional development, reflective practice, teacher, video observation.*

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Introduction

Teacher Training and Reflective Practice

Fostering 21st century skills involve developing collaborative, creative, critical thinking, and socially responsible citizens who can communicate effectively (Educarchile, 2022). Consequently, teachers must tackle this challenge from a contextual approach, critically and reflectively analyzing their own practice. Accordingly, the public educational policy focuses on reflective practice in teacher training (United Nations [UN], n.d.).

In Chile, the recent standards for teacher training and activity also highlight the need to generate strategies for promoting constant reflection on teaching practice (Ministry of Education of Chile [MoEoC], 2021, n.d.-b).

However, teacher-reflective practice is considered incipient (Ruffinelli, 2017) due to two main reasons: the intentionality of the time allocated to reflection in schools (Velez Perez et al., 2018), and the scarce incorporation of teacher training models focused on reflective practice (Ruffinelli, 2017). This may have negative implications to reach South America's educational challenges (Gil, 2018).

Considering the above, the most effective way of supporting a reflective experience is still largely unknown because reflection is a complex process. Tagle Ochoa et al., (2017), states that reflective experience must be promoted through specific actions because reflection does not emerge easily—this practice implies activating attitudinal elements in teachers that could be related to beliefs.

The Educational Experience

The educational experience is a source of knowledge when analyzed or highlighted (van Manen, 2016), and it reveals needs and experiences as a contribution of social intelligence (Dewey, 1938). However, this process is uncommon in the practice of teaching (Piergiorgio, 2010), because not all situations that shed light on and facilitate the analysis of this practice can be experienced.

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Considering the above, emotional, and intellectual devices must be generated to enable teachers to analyze the educational experience and become aware of emotions, sensations and tensions triggered by their experiences (Domingo & de Lara Ferré, 2010), thereby promoting educational transformations based on the understanding of their own actions.

Practical Knowledge

Practical knowledge derives from reflection on the educational experience, which implies becoming aware of actions through a dialogic process between theory-practice, people, their work context, the teacher's experience and role, and society (Domingo & de Lara Ferré, 2010; Lawrence-Wilkes & Ashmore, 2014; Martín-Romera et al., 2022)

This knowledge is a dialectical exploration between personal structures and experience (Polanyi & Sen, 2009). Accordingly, watching videos could provoke a reflection that facilitates learning about experience. However, those personal elements that teachers become aware of by watching videos of their lessons could also make them more capable of meeting educational demands (Clandinin, 1989).

Building practical knowledge implies experiencing reflective processes and listening and paying attention to practice. Thus, knowledge is related to educational reality and provides opportunities to foster and establish personal and professional dialogic connections, thereby constantly improving teaching (Bean & Stevens, 2002; Contreras et al., 2016).

Video-Mediated Strategy for Promoting Reflection on Educational Experiences

Recreating the lived experience lends value and utility to an existing record (Anijovich & Cappelletti, 2019). Accordingly, watching videos can trigger a reflective attitude when examining situations overlooked at the time. This process leads to self-analysis, questioning, a search for answers, inquiry into previous knowledge, and new ideas that could be incorporated into practice (Paquay et al., 2005). Watching videos reveals educational conceptions and causes a confrontation between the personal and professional self (Piergiorgio, 2010). Similarly, Nocetti de la Barra and Medina Moya (2018) revealed that watching videos generates a bidirectional reflective experience; that is, not only the person presenting but also the person watching the video reflects on the practice. Accordingly, creating experiences in which teachers watch videos of their own practice enables them to focus more on students and their learning (Tripp & Rich, 2012), and to rediscover their professional functioning that could help them become aware of their own way of teaching, and of what they know, and what they do as teachers, thus bringing them closer to an epistemology that underlies classroom practice (Borquez-Mella et al., 2020).

The video-mediated strategy has been used to illustrate and review classroom practices with non-reflective and evaluative purposes (MoEoC, n.d.-b). However, a systematic review of practical knowledge has demonstrated that this strategy strongly promoted reflection on practice in the last five years (Sáez Lantaño et al., 2022).

Similarly, some studies have stated that, in addition to the reflective potential of watching videos, this strategy also stands out for promoting research on classroom practice (Tenorio Troncoso & López Norena, 2018), and identifying and underpinning teaching activities, elements that are essential for gaining theoretical knowledge and building practical knowledge (Borquez-Mella et al., 2020).

MoEoC (n.d.-a), acknowledge that the video-mediated strategy promotes collaborative work in schools and encourages professional teacher training. This reflective strategy is also considered crucial for modelling and deriving suggestions from a horizontal perspective. This instrumental approach has become controversial for its focus on errors in teaching practice (Ruffinelli et al., 2020). Therefore, the objective of this research is to describe the function and experience of analysing videos of teachers' lessons from four educational units in the city of Concepción, Chile, through a reflective approach.

Methodology

Research Design

The objective of this study was to describe the role and experience of the analysis of classroom videos with a reflective approach of teachers from four schools in the city of Concepción, Chile. Therefore, it was conducted under an interpretive approach using an instrumental case study design (Stake, 1995).

Sample and Data Collection

The participants were selected through maximum variation sampling (Vieytes, 2004). Accordingly, pre-, and high school teachers with work experience ranging from 4 to 30 years, teaching in public schools and private subsidized by the government, who had recorded their online lessons were selected as study participants during the pandemic.

In this study, nine cases were analyzed, as outlined in Table 1.

Table 1. Characteristics of the Participants

n	Level of teaching	Years of experience	School dependency
Case 1	Secondary	4 years	Public
Case 2		4 years	
Case 3		15 years	
Case 4		24 years	
Case 5		30 years	
Case 6	Pre-school	5 years	Private subsidized by the government
Case 7		6 years	
Case 8		10 years	
Case 9		15 years	

Video-Mediated Reflective Experience

A strategy for stimulating reflection, by viewing videos, was applied in this study. First, the teachers individually watched their video recordings of online lessons, using a self-observation protocol, which indicated some aspects which they should focus on to reflect on the lesson. Subsequently, the teachers wrote comments, flagged problems, and analyzed their own practice and learning.

In the second stage, the teachers participated in an online workshop in which they shared their observation experience, using a flowchart to identify teaching problems and consequences for student learning, and the learning that they incorporated into their practice, based on the reflective experience. The questions of the self-observation protocol and the topics addressed during the workshop are presented in Table 2.

Table 2. Stages of the Reflective Experience

Stage	Questions and/or topics
Observation protocol of a video of your own practice	1.- Identify aspects of your teaching method that demonstrate that your students are learning. 2.- Recognize problematic, unanticipated, or disconcerting aspects of your teaching method. Describe them briefly. 3.- Determine what educational conceptions underlie this way of teaching that perplex you. 4.- Point out what consequences this way of teaching has on your students' learning.
Shared workshop on the experience of watching a video of one's own practice	1.- Sensations that you felt when observing yourself from a professional perspective. 2.- Expectations about your way of teaching. 3.- Previously identified problems about teaching. 4.- Consequences of the identified problems on student learning. 5.- Learning about your way of teaching

Analyzing of Data

In-depth interviews were conducted (Álvarez & Jurgenson, 2009), to understand the teachers' perception of the function of watching videos about teaching practice and the reflective experience. The interviews were held over approximately two months and guided by the educational experience category; however, the role of video viewing in teacher reflection was identified as an emerging category.

Once the interviews were transcribed, content analysis was performed (Krippendorff, 2013), using the qualitative data analysis computer software package Nvivo, version 12.0 (Edhlund & McDougall, 2019). The video-viewing function category gave rise to three subcategories, with 64 codes, and the reflective experience category gave rise to four subcategories with 91 codes. Additionally, coding and framework matrices were used, as well as figures, which helped explain the findings of this research. One reliability criterion of the study was the use of verbatim transcripts from informants for data analysis. In addition, an external researcher checked the data analysis to guarantee the quality of the research (Vasilachis de Gialdino, 2006).

Results

Category 1. Video-Viewing Function

The observation of videos yielded three functions: One of a self-evaluative nature, intended for improvement; and two functions of a reflective approach, referring to awareness of one's own practice and teaching self-knowledge, as shown in Figure 1.

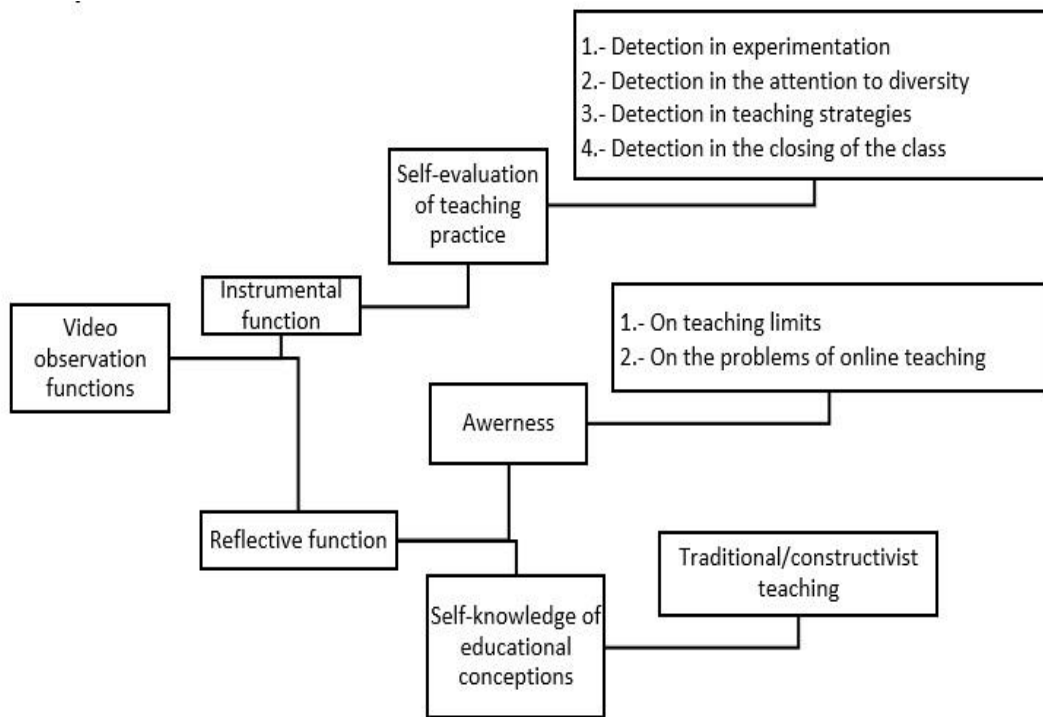


Figure 1. Functions of the Classroom Video Observation

Subcategory 1. Self-Assessment of Teaching Practice for Improving Teaching

The self-assessment function helps appreciate trial and error as an enriched pedagogical practice, rescuing the elements that were positively assessed and learning from mistakes:

"It can be very difficult at first, to observe oneself, to recognize shortcomings more than strengths, because, on the one hand, strengths will allow me to replicate what has turned out well, but on the other hand, the weaknesses that I might have found will contribute to enriching and improving my teaching practice" (Case 4).

"By watching the lesson video, we may greatly improve our practices because, if I see that I could have done this or that in a lesson, asked in this way, changed the grade of the student, the next lesson, I will try to do better, to improve and fix the mistakes that I made, and what I did right, I will try to keep on doing it" (Case 5).

In the previous context, experimentation also arose as part of the improvements tailored to each group of students, evidencing an openness to focus on diversity in the classroom. This approach highlights the importance of using a range of methodological strategies to improve teaching practice:

"When viewing the lessons, I see this process of trial and error and what I have done well, what I have done wrong, what can be improved, what can help me be better with this group, as opposed to a different group, and so you have a greater range of options to be able to improve the teaching-learning process with students and obviously improve our work" (Case 2).

The self-assessment function of the video analysis also helped to identify mistakes undetected during the lesson. In other words, errors were recognized in the teaching strategies, such as the scarce contextualization and the predominance of answers to students' expected questions during the lesson:

"I could see that I taught this lesson like that, I did not contextualize, I should have started with another type of strategy, not with exercises, let's see, I am making this mistake because I am unconsciously giving the students some answers" (Case 3).

Another element that emerges from the video-mediated self-assessment is the end of the lesson, it is considered a relevant process within teaching, albeit weak in the category of teaching practice:

"Although the end of the lesson is very important, this moment was always very short. So, when examining my practice, I observed that I did not emphasize it enough because it is the moment when learning is consolidated" (Case 6).

"After watching the video, I think that I need to strengthen the end of the lesson, unlike other moments of the lesson. That is, at the beginning, I perform activities to assess what the children know; during the class, they work, and at the end? I fail or skip the end, what can I do?" (Case 3).

Subcategory 2. Self-Awareness Function. Self-Awareness of the Limits of Teaching

A pedagogical element that emerges from this self-awareness process is the need to prepare teachers for the diversity of students present in the classroom, thus recognizing that the same lesson planning does not necessarily work in other classes of the same grade level. This goes beyond a traditional planning approach focused on the standardization of the process that usually considers the students' age and common contextual characteristics:

"I observed that, in seventh class A, the class really enjoyed my lesson, but in seventh class B, students at the same age, with similar characteristics, in the same context, did not because they are different. So, when I saw myself, I began to change my planning. Generally, my lessons follow a work plan, but when I realized that, by observing that I take it for granted, I decided to change and vary my lesson, for example, by asking more in-depth questions, among other things" (Case 2).

Similarly, teachers identify pedagogical actions that could differ in online lessons, reaching conclusions that lead them to rethink decision-making towards contributing to student learning.

"From the video, I recognize that I could have continued asking and counter-asking, but, on the other hand, there was that thing about not being able to see them because the students did not show themselves; we only saw their names written on the screen, so we had that disadvantage, but I think I could have given much more and asked many more questions" (Case 5).

Accordingly, identifying other pedagogical actions that could have been implemented in the context of online teaching generated a feeling of impotence because the situation was not reversed in time, leading to an awareness when visualizing the consequences of this way of teaching.

"There were things I could have considered, and I did not, so it still feels helpless. I thought about the students what a pity I did not do it at the time because they most likely did not fully acquire the content" (Case 4).

Furthermore, by viewing the video, teachers gain self-awareness through realizing that the content taught in the lesson was not fully learned by the students, which highlights the need to open to new methodological strategies and resources to support teaching:

"When I saw the lesson, I realized that there were things that I could have considered and I did not, mainly, to use some methodological strategy or some other type of resource that would better support the understanding of the content. Sometimes, one assumes that the content is understood and that the students can remember it, but some elements of the content, in this case, were not fully understood" (Case 4).

Another element that teachers realize when viewing the lesson is related to the proposed activities, which makes them reflect on the students' skill development:

"I have to try to get students to develop higher-order thinking skills, and in that lesson, I was left alone in the application because instead of solving problems, I did contextualized exercises, and the exercises did not become a problem for them. So, I think that was like the main thing that happened to me when I saw myself there" (Case 3).

Lastly, some errors are identified in in-class mathematics exercises, which confuse the students. These errors would have gone unnoticed without this video viewing strategy, which increased the awareness of classroom practices:

"I realized that, at the beginning of the lesson, when I wanted to exemplify a problem, I told them: look, let's first identify what they are asking us, that is, the unknown; at that moment, I thought how terrible this turned out! The problems I presented were confusing since I used the same unknown; perhaps I should have asked another question or posed the question in a different way" (Case 3).

Self-Awareness of Online Teaching Problems

Video viewing facilitated self-awareness of the complexity of preparing online lessons during the pandemic. A key problem was establishing the pedagogical role of the teacher and the limits because virtual learning and technology opened the lessons to different listeners and family members. Consequently, mothers intervened in the teaching-learning process, which affected classroom teaching management:

"The parents were a little demanding; they said: it's my son's turn; my son has only been asked once, and I gave in. After reflecting, I said, but if I were the teacher, I could have told the mother that the lesson was for the children or that her son had already participated, that maybe he could participate again in tomorrow's class, or I could have looked for another strategy, such as involving half of the children on one day and ensuring that the other half participated on the next day. Thus, I would not have had so much lack of concentration, and the children would not have been so tired; that is what caught my attention the most in the video" (Case 7).

Additionally, video viewing generated an awareness of the scarce interaction with students in online lessons. This was problematic in two ways: on the one hand, the dialogue was only focused on the students who participated in the lesson; on the other hand, the evaluation of the process was biased because only the students who participated in the process learned:

"I only focused on the students who answered my questions; that is, I interacted more with them; obviously, the others were there, and I would connect with them later, but I realized that I only interacted with the children who answered my questions in my lesson" (Case 8).

"In the evaluations, I would stay with the children who responded the most, and I would find that they achieved the objective, and I would say, oh, the others did not answer my questions. Or, many times, I didn't see their faces, and perhaps there were other children who were shy and wanted to answer my questions, but I didn't pay attention to them; I only focused on the students who answered my questions" (Case 8).

Considering the above, viewing the video recording of the lesson also raised awareness about the importance of time management during online lessons in a pandemic because the activities limited the participation of the students:

"I could have made all students participate, but I lacked time; perhaps I should have managed it a little better, with respect to the activity we were performing" (Case 6).

"I saw that some children wanted to give their opinion, and I did not respect the time; one student went into more detail than the other, and I limited the intervention time of the latter" (Case 9).

Similarly, teachers of different educational levels became aware of the difficulty they had in working with the content and their insufficient preparation to use technological resources in online lessons, which made them feel frustrated and displeased when watching video recordings of their lessons:

"The other thing that happened to me was realizing that I really didn't like online teaching because we couldn't work on the content as we really wanted; we couldn't do many activities either" (Case 6).

"I felt frustrated because it was the lesson before a test, and we still had to work on solving problems, and I remembered how difficult it was to take online mathematics lessons; it was super difficult because I couldn't find any technological resource that would help me monitor all the boys" (Case 3).

Subcategory 3. Function of Self-Knowledge of Educational Conceptions

The results revealed that video viewing enhances the self-awareness of the practice; this denotes educational conceptions that underlie teaching. When watching the video recording of her lesson, one high school teacher recognized that she used a traditional teaching approach focused on transmitting knowledge but expected her students to apply what they had learned to real life:

"Watching the video, I think that, to a large extent, I teach in a traditional, and perhaps slightly constructivist way, towards enabling students to solve real-life situations by applying what they have learned, but essentially, I am a traditional teacher" (Case 4).

However, in the video recordings of their lessons, the pre-school teachers recognized their constructivist educational conceptions, highlighting the potential of preschoolers and giving them a leading role:

"I consider that I teach primarily constructivist lessons whereby students learn by playing. I like that they are the protagonists because I can transmit knowledge to them, but they must know how to use it and thus learn more, which will be more significant. In online lessons, teaching was a bit more complex, but I was more flexible, and it gave me more opportunities to enable the children to express themselves better; they didn't feel ashamed. Learning is more profitable when students build their knowledge, which enriches teaching because teachers learn from students, through some fantastic answers. Sometimes, teachers underestimate students, but they do teach us" (Case 7).

Accordingly, the comparison of two high school teachers, one with 30 and the other with 5 years of experience, who watched video recordings of their lessons, revealed that both found it difficult to avoid practices focused on behaviorism or traditional teaching, resulting from their training. However, they hinted that they valued a constructivist conception because they were convinced that this was an educationally valid approach:

"I lecture, lecture, and lecture. I try again and again for them to follow me, through questions. I try to get them to build this lecture with me. However, I saw myself in the behaviorist video, tending towards constructivism, and that is not what I would like to teach; I would not want to teach the way they taught me, but you realize that it is very difficult to unlearn. In addition, the consequences of this way of teaching are not what education expects, that is, not what others expect, and of course, I do not like that; I do not like to teach as they taught me, and I have to try to unlearn that" (Case 5).

"In online lessons, you need to keep going up to a certain point; you always must have a common thread, so one tends to repeat the ways of teaching of our teachers. So, one remembers a teacher who did it well, so I am going to try and do it as the teacher did. So, I was able to identify some nuances in the video recording of my lesson; those preconceptions and those assumptions are still present, but the way they taught me is no longer the way in which I should teach because the students are no longer the same" (Case 2).

Category 2. Video-Viewing Reflective Experience

The experience of watching a video of the teaching exercise makes it possible to identify different types of reflective experiences that emerge from the analysis of the practice and to recognize elements that facilitate and hinder reflection. Figure 2.

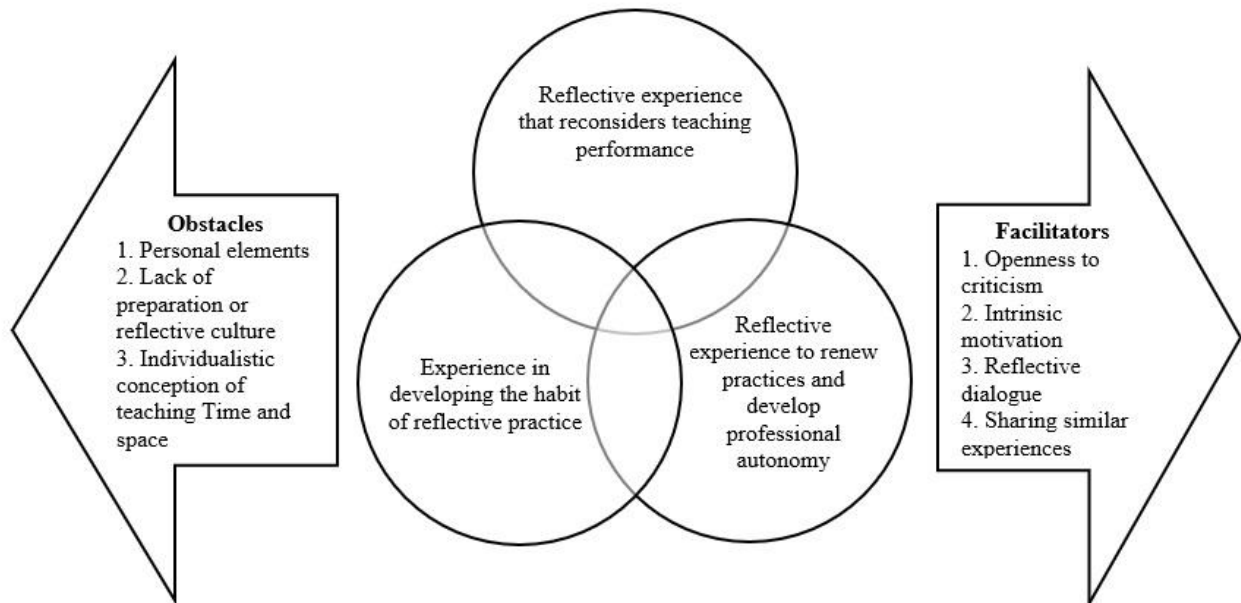


Figure 2. Types of Reflective Experiences of Teachers, Facilitating and Hindering Elements That Arise With the Observation of Classroom Videos

Subcategory 1. Types of Video-Mediated Reflective Experiences

The video-viewing reflexive experience helped break the routine and structures that mechanize teaching, which have been developed over years of professional practice. This reflection comprised stopping the practice and reconsidering the teaching activity by analyzing the action performed and the intended goal, which helps explain and improve student-based teaching:

"This viewing process is useful because one analyses one's practice, since over time one believes that there is a formula that always works. However, I realize that it is not the case. This helps me adapt to changes, to different classes, to how students learn or how they are as people" (Case 1).

"This process of watching the video is super profitable because when one teaches lessons one does not pay attention to the details, nor does one become aware of what one is doing well. So, I think that this viewing is the only way to realize the children's interests or why such a thing happened to me, why something that I perhaps thought was going to work for me didn't work, and it also gives us an opportunity to keep improving and learning" (Case 7).

The video-mediated reflective experience helped analyze aspects requiring improvement, which is an opportunity to deepen student learning, transform practices, and develop professional autonomy:

"It is excellent for a teacher to have this viewing experience because this way we realize what we are failing in and what we are doing wrong; it allows us to observe the making of pedagogical decisions and improve our practice" (Case 8).

"Watching the videos helps us improve as teachers, but not superficially, that is, focusing on whether the PowerPoint slides are attractive or whether the goal was stated clearly. No! It helped to develop a more critical, deeper look and to avoid superficial student learning" (Case 2).

Conversely, watching the videos allowed the teachers to stop their own practice and rewind the activity to conclude with a purpose. Accordingly, the teaching performance is problematized, and the approach reconsidered. Consequently, watching the video may facilitate the development of the reflective practice that leads to the habit of rethinking:

"If this process were common in our practice, we could rethink our lessons until it became a habit, then we would get used to it and perhaps we would not need to watch a video recording of the lesson; we could review it mentally and see what we could have done, what we could have changed, what we could have kept to ourselves" (Case 5).

Subcategory 2. Obstacles to Video-Mediated Reflection

Personal traits, such as the fear of external judgment, finding what one does not want to find, as well as experiencing feelings of shame or shyness, combined with a competitive environment in teaching, hinder video-mediated reflection:

"The fear of finding something that one does not want to find, facing the fact that there are things that, if we believe, in our belief, are right, but you realize that they are not like that; there is also fear of a different experience, an experience that is unusual" (Case 1).

"I think that sometimes it is embarrassing to express oneself or admit one's mistakes in front of other people; it can be shyness; I don't know what to call it, or a lack of self-criticism. I think that we are not prepared to criticize ourselves, that is, to reflect and say: no, I'm good, or I'm bad. It's hard for us to say that I am wrong, and I think it's because of competitiveness" (Case 9).

Another hindering element mentioned is the teachers' lack of preparation for reflection. This could also be regarded as poor reflective culture in teaching since teachers recognized that they do not know whether their actions are part of a reflective process or remain a mere description of their teaching performance:

"I think that we lack a culture of reflection in our profession; yes, we really lack that culture" (Case 7).

"I am not used to reflecting; sometimes we don't know how to reflect; one says, I am going to reflect, but perhaps what one does is not reflect, but instead describe the lesson" (Case 3).

This lack of preparation for reflection on the part of teachers highlighted their lack of guidance for this process without losing focus. Therefore, another element that hinders reflection is an individualistic conception of the professional practice of teaching:

"We lack a pattern or a guide to reflect, to identify details because one observes in a general way, so we need someone or something that makes us point to reflection" (Case 5).

"Teachers require guidance during their reflection process, which is very important because that way they don't lose focus" (Case 2).

Time hampers video-mediated reflection. The spaces allocated in schools for reflection seem scarce, albeit relevant to incorporating reflective experiences into daily practice to achieve a greater appropriation or reflective culture:

"What most hinders teacher reflection is time; there is a lack of spaces to do this, to turn it into a habit, and to normalize it" (Case 7).

"I think that there should not be so much administrative advice for teachers; information can be circulated by email, as we all know how to read and write, so time must be optimized to make it easier for teachers to reflect by viewing video recordings of their own practices" (Case 2).

Subcategory 3. Facilitating Factors of Individual Video-Mediated Reflection

Being open to criticism is important for reflection. Additionally, this attitude may facilitate the construction of learning because of teacher reflection:

"To reflect, one must open (oneself) up to collect everything because otherwise one will not be critical of oneself and will not be able to learn" (Case 4).

"I believe that in order to reflect one must be willing to criticize oneself and accept observations from others; it is the only way to see them in a constructive way and learn" (Case 8).

Similarly, the willingness to reflect is mobilized by the intrinsic motivation to improve teaching; that is, it is not imposed and does not necessarily aim at complying with external elements:

"This viewing process did lead us to reflect because we are not doing it for compliance but to improve teaching practice, so we have a broader perspective and understand that we do it to assess what I am doing and how am I doing" (Case 9).

Subcategory 4. Facilitating Factors of Collective Video-Mediated Reflection

The experience of sharing a space for reflective dialogue, among teachers who watched their video, was also considered as a facilitator of reflection, since the teachers became aware of pedagogical elements that they could not detect on their own. When a teacher listens to a peer's account experience, he rescues elements from his own practice and gives it sense:

"We agree on some things and not so much on others, but the analysis made by another colleague in your class causes you to suddenly realize what you had not considered; it happened to me; there were things that I approached with a specific perspective, but it turns out that another colleague, in her own class, had another perspective, so I said, oops! I had not thought of this like that; I had not considered it; I did not take it into account; I did not see it, and that situation helped me to reflect" (Case 5).

"Listening to the experience of another person, another experience, another reality, led me to reflect on my own reality, see the commonalities, the differences; even when other colleagues named their experiences, one was making a switch and

realizing that he was right; then, I remembered the lesson that I observed and analyzed and said, yes, that also happened to me” (Case 1).

Continuing the analysis of the video recordings from a collective perspective revealed that the teachers also recognized that manifesting or detecting common errors facilitates reflection because, irrespective of the context or educational reality in which they work, their teaching practice shares common complexities that become learning opportunities:

“Different realities that applied to a colleague from area A also apply to a colleague from area B. We realized that some things were common in our practice; externalizing what happened to us in the viewing experience in a professional way and recognizing professional mistakes led us to open ourselves to reflection” (Case 1).

“Several teachers experienced the same as I did; they struggled with using technology or managing time, and sharing that experience was super-helpful because when one reflects together, it helps generate solutions and one gets to learn about other practices as well” (Case 7).

Discussion

The main results of this research show three functions of the observation of classroom videos: Self-evaluation, awareness, and self-knowledge of educational conceptions. In addition, it was found that the experience of watching a classroom video was recognized as a reflective experience that drives to reconsider teaching performance; renew professional practices and develop a habit of reflective practice. Likewise, elements that facilitate and hinder the reflection caused by the observation of classroom videos were found.

Regarding the self-evaluative function, it was found that teachers focus mainly on errors committed during the execution of their classes. For Paquay et al., (2005), this action has a reflective character, since the teacher captures elements that, in the moment of the video, observation become significant, and instead, at the time of carrying out the class, they were completely unnoticed. For Ruffinelli, et al. (2020), this aspect is instrumental and becomes controversial, since video observation is a highly reflective strategy that goes beyond error detection. This study, considers that the self-evaluative function leads to improvement, teaching adjustment and recognition that the practice is improvable, which brings the faculty closer to a reflective approach, but does not connect with the construction of knowledge that is subsequently incorporated back into educational experience (Contreras et al., 2016), this could be because faculty do not reach to deepen or advance in the understanding of teaching, which could be hardly transformative.

The function of awareness and self-knowledge of educational conceptions are situated in a reflective approach, since both can re-signify the teaching task, since teachers become aware of their actions and analyze their practice, considering the relationship they have with their students and with the contents they teach. This leads to an understanding of teaching that facilitates the visualization of different types of pedagogical knowledge (Contreras et al., 2016), which combine to approach teaching, make decisions based on the educational process (Nocetti de la Barra et al., 2019), and advance in the construction of a knowledge generated in the practice and in dialogue with theory, which produces autonomy and professionalization (Vezub, 2016)

By admitting the experience of observing classroom videos as a reflective experience that leads to a reconsidering of the teaching performance, we could liken it to a level of comparative reflection (Jay & Johnson, 2002), since teachers focuses mainly on analyzing what they did, contrasting with what they wanted to do. Therefore, this leads them to generate explanations that favor the understanding of their action. Furthermore, at this same level of comparative reflection (Jay & Johnson, 2002), the recognition of this experience could be situated as a reflective experience that favors the renewal of professional practices; since, as the author states, the problematization and questioning of the action could transform the practices for the benefit of students, which would lead to decision making and would bring closer to teacher autonomy.

With respect to, the recognition that the observation of classroom videos, is an experience that when lived systematically could develop a habit of reflective practice, we agree with Perrenoud (2004), who states that the reflection of practice starts from a retrospective perspective that eases the analysis of the action. Consequently, the observation of classroom videos, could contribute to the teachers’ progress in the investigation of their own practice (Tenorio Troncoso & López Norena, 2018). However, it is considered that this experience does not facilitate a transformation of teaching, since observers focus on the action and do not reach to observe cultural, ethical, political, or social categories (Lara Subiabre, 2019)

Regarding, the hindering and facilitating elements of the reflective experience with classroom video observation, it was found that, teachers still fail to advance in reflective processes, even though Chilean public policy emphasizes spaces and times to contribute to reflection (MoEoC, 2018). However, teachers still need to be more willing to reflect, as well as, educational institutions should promote reflective spaces mediated by strategies, since this is not a simple process (Tagle Ochoa et al., 2017), and it needs to be intentional (Guerra Zamora, 2009).

Considering the above, it is necessary for the management teams of educational units to take a reflective approach, privileging opportunities for the analysis of teaching (Houchens et al., 2012). For this purpose, public policies must go beyond the discursive and promote strategies that contribute to reflect on the educational experience and facilitate the

articulation of theory and practice. Problems which several researchers are aware of (Guevara, 2018; Nocetti de la Barra et al., 2019; Ponce Gea & Rico Gómez, 2022; Ruffinelli et al., 2020).

Conclusion

This research had as objective to describe the functions of classroom video observation and the reflective experiences of teachers from four schools in the city of Concepción, Chile. As a conclusion, it is established that the functions of the observation of classroom videos, promote the reflection of the teaching practice, since they allow the detection of pedagogical elements that can be significant for improvement. This process, begins with the recognition of superficial elements, advancing in the detection of errors that arise when observing; to aspects that contribute to the recognition as a teacher and how teaching does or does not favor students. Therefore, it is considered a reflective experience that facilitates the inquiry of practice, which could contribute to teacher professionalization. In this sense, teachers examine their actions, becoming aware of their thoughts, extrapolate situations and draw conclusions, overcoming an uncritical and instrumental approach, which leads them to a reflective approach.

Recommendations

According to the functions that resulted from the observation of videos, it is suggested to broaden the scope from grounded theory; this with the purpose of revealing conditions that favor or hinder this device to have a reflective approach. In addition, from the role of awareness of the limits of teaching, it is recommended to investigate the relationship between reflective practice and transformation of teaching, mediated by the observation of videos of teacher's own practice. Likewise, from the function of self-knowledge, it is suggested to investigate the relationship between reflective practice and teachers' professional development based on the transformation of educational and didactic conceptions.

Limitations

As limitations of this study, it can be mentioned that the teachers' practices do not have a follow-up to detect their improvement, to reflect. In addition, the recordings that were observed, were of online classes conducted during the pandemic, which supposed new experiences and challenges that teachers had to face quickly without preparation or adaptation. This caused the participants to focus mainly on the detections of errors, requiring greater mediation to move towards a reflective process.

Ethics Statements

Informed consent was obtained. The confidentiality of the data was protected, which were stored with acronyms. The researchers did not have access to the recordings of the classes, since these were observed exclusively by the participants.

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Sáez-Lantaño: Conceptualization, analysis, writing. Nocetti-de-la-Barra: Design, reviewing, supervision.

References

- Anijovich, R., & Cappelletti, G. (2019). Documentos narrativos y practica reflexiva en la formacion de profesores. [Narrative documents and reflective practice in teacher training]. *Revista Panamericana de Pedagogia*, (28), 37-58. <https://doi.org/10.21555/rpp.v0i28.1619>
- Álvarez, J. L., & Jurgenson, G. (2009). *Como hacer investigación cualitativa. Fundamentos y metodología* [How to do qualitative research. fundamentals and methodology]. Paidós.
- Bean, T. W., & Stevens, L. P. (2002). Scaffolding reflection for preservice and inservice teachers. *Reflective Practice*, 3(2), 205-218. <https://doi.org/10.1080/14623940220142343>
- Borquez-Mella, J., Garrido-Osses, S., & Flores-Gajardo, L. (2020). La filmacion de clase en contexto de colegialidad: Estrategia que favorece los procesos reflexivos respecto de la practica pedagogica. [The class filming in collegiate context: A strategy that favors the reflective processes on the pedagogical practice]. *Propósitos y Representaciones*, 8(SPE1), Article e500 <https://doi.org/10.20511/pyr2020.v8nspe1.500>

- Clandinin, D. J. (1989). Developing rhythm in teaching: The narrative study of a beginning teacher's personal practical knowledge of classrooms. *Curriculum Inquiry*, 19(2), 121-141. <https://doi.org/10.2307/1179405>
- Contreras, J., Orozco, S., Arnaus, R., Arbiol, C., Serra, A., Ventura, M., Molina, M., Blanco, N., López, A., & Gabbarini, P. (2016). *Tensiones fructíferas: Explorando el saber pedagógico en la formación del profesorado* [Fruitful tensions: Exploring pedagogical knowledge in teacher education]. Ediciones Octaedro.
- Dewey, J. (1938). *Experience and education*. Macmillan Company.
- Domingo, J. C., & de Lara Ferré, N. P. (2010). *Investigar la experiencia educativa* [Researching the educational experience]. Ediciones Morata.
- Edlund, B., & McDougall, A. (2019). *NVivo 12 essentials*. Lulu.
- Educarchile. (2022, October 23). *Habilidades siglo XXI*. [21st century skills]. <https://tinyurl.com/2y4qfpya>
- Gil, R. L. (2018). *La formación docente: Horizontes y rutas de innovación* [Teacher training: Horizons and routes of innovation]. CLACSO. <https://doi.org/10.2307/j.ctvnp0k1g>
- Guerra-Zamora, P. (2009). Revision de experiencia de reflexion en la formacion inicial de docentes [Review of experience of reflection in teacher's education]. *Estudios Pedagogicos* 35(2), 243-260. <https://doi.org/10.4067/S0718-07052009000200014>
- Guevara, J. (2018). Saberes practicos en la formacion docente para la educacion inicial. [Practical knowledge in preschool teacher training]. *Pedagogia y Saberes*, 48, 127-139. <https://doi.org/10.17227/pys.num48-7378>
- Houchens, G. W., Hurt, J. C., Stobaugh, R., & Keedy, J. L. (2012). Double-loop learning: A coaching protocol for enhancing principal instructional leadership. *Qualitative Research in Education*, 1(2), 135-178. <http://doi.org/10.4471/qre.2012.08>
- Jay, J. K., & Johnson, K. L. (2002). Capturing complexity: A typology of reflective practice for teacher education. *Teaching and Teacher Education*, 18(1), 73-85. [https://doi.org/10.1016/S0742-051X\(01\)00051-8](https://doi.org/10.1016/S0742-051X(01)00051-8)
- Krippendorff, K. (2013). *Content analysis: An introduction to its methodology* (3rd ed.). Sage.
- Lara Subiabre, B. A. (2019). Reflexion pedagogica de profesores en formacion. Un estudio de cuatro universidades Chilenas [Pedagogical reflection in pre-service teachers. A study of four Chilean universities]. *Perspectiva Educacional*, 58(1), Article 802. <https://doi.org/10.4151/07189729-Vol.58-Iss.1-Art.802>
- Lawrence-Wilkes, L., & Ashmore, L. (2014). *The reflective practitioner in professional education*. Palgrave Macmillan. <https://doi.org/10.1057/9781137399595>
- Martín-Romera, A., Martínez-Valdivia, E., & Higuera-Rodríguez, L. (2022). The practicum in teacher training: Conditions for integral training. *European Journal of Educational Research*, 11(4), 2115-2126. <https://doi.org/10.12973/eu-er.11.4.2115>
- Ministry of Education of Chile. (2018). *Modelo de Formación para el desarrollo profesional docente y directivo*. [Training model for the professional development of teachers and managers]. <https://tinyurl.com/298d9p3f>
- Ministry of Education of Chile. (2021). *Estandares de la profesion docente: Marco para la buena ensenanza*. [Standards of the teaching profession: Framework for good teaching]. <https://tinyurl.com/2ctjaz6w>
- Ministry of Education of Chile. (n.d.-a). *Club de video: Serietrabajo colaborativo para el desarrollo profesional docente* [Video club: Series collaborative work for teacher professional development]. <https://tinyurl.com/25worj2t>
- Ministry of Education of Chile. (n.d.-b). *Sistema de reconocimiento*. [Recognition system]. <https://www.cpeip.cl/sistema-reconocimiento/>
- Nocetti de la Barra, A., Hizmeri Fernandes, J., & Arriagada Candia, J. (2019). Narrativas, prácticas y saberes pedagogicos en docentes en formación. [Narratives, reflective practices and pedagogical knowledge in teachers in training]. *Revista Panamericana de Pedagogia: Saberes y Quehaceres del Pedagogo*, (28), 203-228. <https://doi.org/10.21555/rpp.v0i28.1673>
- Nocetti de la Barra, A., & Medina Moya, J. L. (2018). Condiciones que desencadenan la reflexion docente en el futuro profesor durante sus prácticas de formacion [Teacher reflection and the conditions that trigger it in future teachers during their practicums]. *Revista Espacios*, 39(15), 2-12. <https://tinyurl.com/243o5wc2>
- Paquay, L., Altet, M., Charlier, E., & Perrenoud, P. (2005). *La formacion profesional del maestro: Estrategias y competencias* [Teacher professional development: Strategies and competencies]. Fondo de Cultura Economica.
- Perrenoud, P. (2004). *Desarrollar la practica reflexiva en el oficio de enseñar profesionalización y razón pedagógica*. [Developing reflective practice in the teaching profession professionalization and pedagogical reasoning]. Grao.

- Piergiorgio, R. (2010). *El cuarto saber. Guía para el aprendizaje experiencial*. [The fourth knowledge. A guide to experiential learning]. KKIEN.
- Polanyi, M., & Sen, A. (2009). *The tacit dimension*. University of Chicago Press.
- Ponce Gea, A. I., & Rico Gómez, M. L. (2022). Dificultades y propuestas para el maestro ideal del siglo XXI: Un modelo desde la teoría fundamentada. [Problems and challenges for the ideal teacher of the 21st century: A grounded theory model]. *Qualitative Research in Education*, 11(1), 01-28. <http://doi.org/10.17583/qre.8865>
- Ruffinelli, A. (2017). Formación de docentes reflexivos: Un enfoque de construcción y disputa. [Educating reflective teachers: An approach under progress and dispute]. *Educacao e Pesquisa*, 43(1), 97-111. <http://doi.org/10.1590/S1517-9702201701158626>
- Ruffinelli, A., Morales, A., Montoya, S., Fuenzalida, C., Rodríguez, C., López, P., & González, C. (2020). Tutorías de prácticas: Representaciones acerca del rol del tutor y las estrategias pedagógicas. [Internship tutorials: Representations About the role of the tutor and the implemented pedagogical strategies]. *Perspectiva Educacional*, 59(1), 30-51. <https://doi.org/10.4151/07189729-vol.59-iss.1-art.1004>
- Sáez Lantaño, A., Nocetti de la Barra, A., & Flores Lueg, C. (2022). El saber práctico del profesorado: Una revisión sistemática de la investigación actual. [Teacher practical knowledge: A systematic review of current scientific research]. *Perspectiva Educacional*, 61(3), 26-55. <https://doi.org/10.4151/07189729-Vol.61-Iss.3-Art.1246>
- Stake, R. E. (1995). *The art of case study research*. Sage.
- Tagle Ochoa, T., Díaz Larenas, C., Alarcon Hernandez, P., Ramos Leiva, L., Quintana Lara, M., & Etchegaray Pezo, P. (2017). El aprendizaje y la provisión de retroalimentación en la escritura académica: Creencias de estudiantes de pedagogía en inglés de universidades chilenas. [The learning and feedback provision of academic writing: Beliefs held by pre-service teachers of English]. *Revista Complutense de Educación*, 28(4), 1119-1136. <https://doi.org/10.5209/RCED.51615>
- Tenorio Troncoso, M. Y., & López Norena, G. (2018). El video de la clase como estrategia de reflexión y metacognición sobre la práctica pedagógica de los maestros en formación [The video of the classroom like strategy of reflection and meta-cognition on the pedagogic practice of the teachers in formation]. *Revista Electrónica, Entrevista Académica*, 1(3), 258-274.
- Tripp, T., & Rich, P. (2012). Using video to analyze one's own teaching. *British Journal of Educational Technology*, 43(4), 678-704. <https://doi.org/10.1111/j.1467-8535.2011.01234.x>
- United Nations. (n.d.). *Sustainable development goals*. Retrieved 2022 November 10, from <https://www.un.org/sustainabledevelopment/>
- van Manen, M. (2016). *Researching lived experience: Human science for an action sensitive pedagogy* (2nd ed.). Routledge. Routledge. <https://doi.org/10.4324/9781315421056>
- Vasilachis de Gialdino, I. (Eds.). (2006). *Estrategias de investigación cualitativa* [Qualitative research strategies]. Gedisa Editorial.
- Velez Perez, A., Gonzalez-Weil, C., & Bravo Gonzalez, P. (2018). Ciclos reflexivos y comunidad de aprendizaje: Hacia el cambio en la práctica pedagógica en docentes de ciencias naturales. [Reflective cycles and learning community: Towards change in the pedagogical practice of natural science teachers]. *Revista Electronica de Innovacion En Enseñanza de Las Ciencias*, 2(1), 74-98. <https://tinyurl.com/26qyvlgd>
- Vezub, L. F. (2016). Los saberes docentes en la formación inicial. La perspectiva de los formadores. [Teacher knowledge in initial education. The perspective of teacher educators]. *Pensamiento Educativo: Revista de Investigación Educativa Latinoamericana*, 53(1), 1-14. <https://doi.org/10.7764/PEL.53.1.2016.9>
- Vieytes, R. (2004). *Metodología de la investigación en organizaciones, mercado y sociedad: Epistemología y técnicas*. [Research methodology in organisations, market and society: Epistemology and techniques]. Editorial de las Ciencias.