

TOWARDS THE STRENGTHENING OF THE TEACHING ROLE FROM ITS PROFESSIONALIZATION

¹Diana Fernandez and ²Nataly Garcia

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Abstract

This paper focuses on analyzing the relationship between pedagogical content knowledge (PCK) and teaching professionalization, taking into account a case study by a Social Science teacher. The case study was conducted in an official school with sixth graders. The intervention focused on promoting in the teacher the design of teaching strategies taking into account the elements of the PCK. Given this, the teacher designed ICT-mediated teaching strategies, with different technological tools; which she integrates consistently and according to teaching needs, bearing in mind not only the curriculum but also the pedagogical intentionality. Thanks to that, it was possible to understand when assessing the impact of the intervention, that her level of teaching professionalization was strengthened, since the teacher was evoked to plan her teaching tools based on the aspects that make up the PCK, refining her disciplinary knowledge, technological competences and also the importance of the emotional aspect in the teacher professionalization since positive emotions fostered on her, the ability to reflect on their pedagogical practices. Given the above, it is important to highlight the teaching professionalization in the educational processes.

1. Introduction

The proposal is carried out in the educational institution Manuel Uribe Angel, located in the municipality of Envigado, Colombia in the school year 2021. It is a public institution with elementary, middle and high school levels. The students belong to different socioeconomic strata such as 2, 3, 4.

The academic level presented by the students of the educational institution, taking into account the external standardized tests, saber tests, ICFES tests, show a medium-low level and the internal tests of the institution, which are called period tests, show the same tendency.

There may be several factors that cause this problem; however, it is considered of utmost importance to focus the attention on the teacher. Given the above, it is prudent to carry out actions that seek to strengthen the professionalization of teachers and, as a consequence, it is expected that the academic levels of the institution will improve.

¹Magister in Processes of Learning and Teaching of Second Languages Pontificia Bolivariana University – Medellin

²Magister in Education, CESUN University – Tijuana, México

In this case, the research is carried out in the area of social sciences, for the sixth grade. The reason for focusing on these groups derives from the fact that, at this stage, students begin their transition process from elementary school to junior high school, this change is accompanied by a variation in the methodological and didactic strategies of teachers, a change in the level of complexity and academic deepening and a different educational site, therefore, in this grade the bases are forged to assimilate the teaching-learning processes belonging to this school cycle; hence the importance of the role of the teacher in this process.

1.1. Population

The teacher under study who accompanies the educational process, has a degree in social sciences, a master's degree in education with nine years of work experience. The educator is in charge of 4 groups of sixth grade, and whose age range between 9 and 15 years and guides the subjects of social sciences and philosophy.

The teacher is interested in implementing the elements of PCK in her pedagogical practice. This motivation arises from knowing the reports of other teachers in academic and behavioral meetings, in which it is stated that students are dispersed and apathetic to academic processes.

Some students have special educational needs and a small portion of students study for the second or third year the same school grade, very few of these learners show interest in learning, it seems that they just want to obtain only the passing grade, regardless of the construction of knowledge and the internalization of it, constituting this a factor that worries the teacher in relation to her pedagogical practice.

2. Objectives

2.1. General Objective

To analyze teacher professionalization, based on elements of the PCK in teaching strategies applied to sixth grade students of the Manuel Uribe Angel educational institution.

2.2. Specific Objectives

To design teaching strategies for social sciences taking into account the elements that constitute the PCK.

To apply the teaching strategies to sixth grade students taking into account the elements of the PCK.

To evaluate the impact of the intervention of the teaching strategies in the strengthening of teacher professionalization.

3. Methodology

The research is qualitative according to Hernández *et al.* (2014) is focused on the understanding of phenomena in the perspective of the participants or group themselves and according to the context in which they are immersed, likewise the design of the research is structured from the action-research. Data collection will be carried out from participant observation guides, interviews and teacher records.

The research will be structured in three phases: a diagnostic phase from the collection of information and the conceptual analysis of the bases that support this study; a second phase of intervention in which the teaching proposals related to the topics of social sciences for the sixth grade are applied and finally a phase of analysis or validation of the triangulation of the data found, the conceptual references and the proposed objectives.

4. Theoretical Framework

4.1. Background

In the study carried out by Trejos *et al.* (2017) it is evident that although teachers have a mastery of the discipline they teach, it is necessary to strengthen their pedagogical practices so that they take advantage of the technological or human resources that are available and thus generate significant learning in students. In addition, the need to improve the knowledge bases that take place in the primary school where the training stage begins; as a result, generating a positive response to national and international requirements in the education system.

Ortega (2019) carried out a study in which the teaching of specific knowledge according to the school curriculum is articulated and integrated with technology in the classroom, making use of the pedagogical technological knowledge of the content and the pedagogical knowledge of the content. The author concludes that the pedagogical technological knowledge of the content:

It is recognized in a particular way in the teaching work, especially in the processes of transformation of the content to be taught, an adequate place where the different technological devices can contribute and potentiate the different didactic representations with which the teacher works for the learning of the contents of the school subjects by the students (Ortega, 2019).

Likewise, the author indicates the importance of recognizing the role of the teacher as a professional who is not limited to the repetition of knowledge but to the construction of it from the reinterpretation of his specific knowledge, its relationship with the context and the established purpose.

Another study carried out by Grossman (2005) highlights the importance of generating changes in how subjects are taught and conceived, derived from understanding and relating pedagogical practices and all this made possible from the understanding of the PCK and how these implications affect the new pedagogical practices of the teachers analyzed.

It is important to pay attention to teachers' expectations regarding their students and how the teacher promotes motivation and leads students to achieve these goals.

4.2. Conceptual Framework

Here the theoretical foundation that supports the research is, relating the pedagogical content knowledge, the elements of the PCK and its implications with the professionalization of teachers.

Pedagogical content knowledge: To address the pedagogical content knowledge, it is important to analyze the perspective of the person who introduced its concept; Shulman (2005), *Knowledge and Teaching: Foundations of the New Reform*, supports

The pedagogical content knowledge is the category that, with greater probability, allows to distinguish between the understanding of the specialist in an area of knowledge and the understanding of the pedagogue (Shulman, 2005).

The above statement is understood as the mixture between the knowledge of the teacher (content) and the steps followed by the teacher for the achievement of the educational objective (didactics).

Consequently, for Shulman, the teacher through his pedagogical practice manages to find the appropriate strategies to transform the teaching contents into knowledge susceptible to understanding by all students and taking into account the particularities, skills and competences of each one of them, it is therefore that the teacher is the one who, in addition to mastering the knowledge at the conceptual level, structures the most appropriate way to build it in students depending on the context and needs of the same.

Furthermore Shulman (1986) (*Those Who Understand: Knowledge Growth in Teaching*) considers that the Pedagogical Content Knowledge is constituted in a fundamental element for teachers in teaching, this method refers to teachers can transmit the knowledge of their subject matter in a way that this becomes susceptible to be learned mediated by didactic strategies to guide it to each one of the students.

According to Jarauta *et al.* (2016) pedagogical content knowledge requires the skill of the teacher to interpret everything related to his disciplinary knowledge and thus achieve the understanding of it for their students. Not only the concepts but also the relationship with other subjects, the context, previous knowledge, the curriculum and the factors that could generate obstacles or facilitate the teaching-learning process. All this in order to include new methodological strategies according to the needs. In this regard Largo (2017) he affirms that when teachers

incorporate various methodologies into their classes, they have a positive impact on the teaching and learning process of students, since improving teachers' knowledge at the same time improves the performance of learners. On the one hand, Leal (2014) considers that the PCK is practical with respect to relating the contents of the subject with the teaching strategies and this as a response to the context of the classroom from the reflection of its own pedagogical practices and the results obtained and analyzed critically giving the teacher a methodological dynamism in his teaching processes. Likewise, the author proposes that to integrate the PCK it is important to have three basic knowledge: Disciplinary knowledge, knowledge of specific didactics and knowledge of the context.

PCK Elements: The PCK has been the subject of study on many occasions, in a very special way perhaps one of the most important restructurings was the one established by Gess-Newsome (2015) in order to agree on aspects of the PCK and at the same time strengthen research in scientific education, the strengths and weaknesses of this model were recognized, resulting in a unifying model, in which the professional knowledge of the teacher (Teacher Professional Knowledge and Skill) is highlighted, the components are: evaluation knowledge, pedagogical knowledge, content knowledge, students and curriculum knowledge.

On the other hand (Verdugo *et al.*, 2017) taking into account the studies of Vos Verloop and De Vos; Park and Oliver and Shulman believe that the components of the PCK are structured as follows:

- *The purpose of teaching a certain topic or issue.*
- *Difficulties that students will have.*
- *Curriculum.*
- *Instructional strategies and representations of the contents.*
- *Instructional resources.*
- *Evaluation.*
- *The subject to be taught (contents).*
- *The teaching context.*
- *Didactics of the discipline.* (Verdugo *et al.*, 2017)

The author's idea is shared when he expresses that not all these elements are a direct part of the PCK since in some sources they are considered as part of a subcategory; this is how instructional resources could be integrated with the didactics of the discipline.

The aforementioned elements play a preponderant role within the classroom, since there is a relationship between these and the pedagogical practices derived from the context, beliefs and orientations of the teacher; because the teacher not only transforms and modifies his methodological strategies but also his attitudes are influenced by the experiences in the classroom processes, also transiting in the emotional field.

Subsequently, knowledge is built in students taking as a reference their beliefs, their previous knowledge and their attitudes, given teachers an indicator of the effectiveness of their process. According to Gess-Newsome (2015) in this model a central importance is given to the professional knowledge of the teacher, to his practice, to the result of the students, and to the influence of the context in the development of the PCK.

According to PCK studies, the same results are often found, they agree with Pinto and Gonzalez (2008) in relation to:

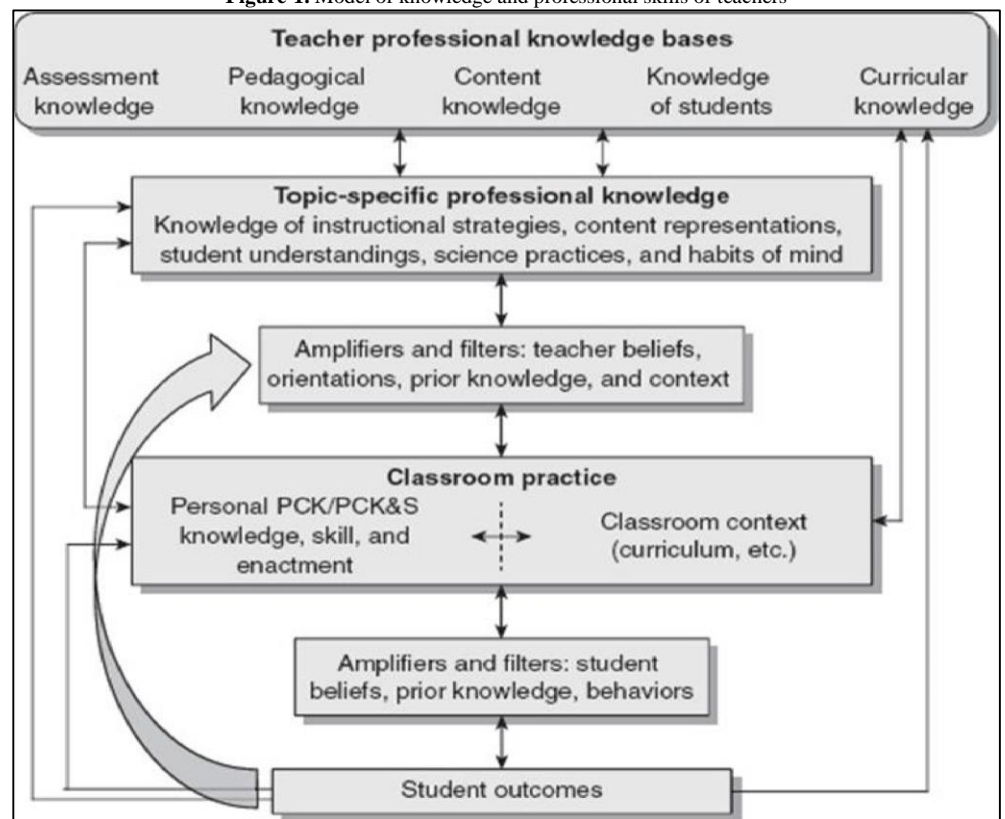
- a. The existence of difficulties in terms of the content knowledge by teachers, given that the acquisition, mastery and use are not appropriate.
- b. Difficulties in the didactic structuring of the contents and the relationship of this with the rhythms and students' learning styles

- c. The deficiency in the content knowledge leads to a lack of knowledge of the specific didactics and in the same way its relationship with the knowledge of the student.
- d. It is the utmost importance for the formation of the PCK to take into account the interaction between colleagues, to integrate the professional experience of each teacher, to promote study groups and training in teacher professionalization.
- e. There is a positive relationship between a teacher who has high levels of the PCK and his teaching professionalization level.

Consequently, studies such as the one carried out by Vergara and Cofré (2014) in relation to PCK, in graduates of pedagogical careers in Chile shows that there is little training in the teaching of the discipline and practical training, as well as missing subjects in the area of didactics and the PCK. Thus, the study highlights the importance of universities incorporating in their curricula the PCK of teachers in training, specific didactic training not only in the initial training of teachers but also for teachers in practice. In this same sense and in relation to teachers in training, (Fonseca and Martínez, 2013) they mention how the PCK contributes to the training of future teachers and the pedagogical practices of practicing teachers. In this research all the elements of the PCK are visualized, pointing out aspects such as the ideas of the students, the teaching strategies, the evaluation and the knowledge of the curriculum, in this way the study shows the importance in teacher training by allowing the reflection of knowledge in action and teacher training from the PCK.

To illustrate in a timely manner the elements involved in the PCK and its relationship with other aspects that are configured as amplifiers and filters and that in one way or another, can constitute obstacles or opportunities to configure the professionalization of teachers, the following figure is presented:

Figure-1. Model of knowledge and professional skills of teachers



Gess-Newsome (2015). A model of teacher professional knowledge and skill including PCK: Results of the thinking

From the PCK Summit. Pg 37.

All the elements of the PCK mentioned above structure the level of teacher professionalization.

Teacher professionalization: The profession as a teacher according to Martín and García (2018) is assumed from different perceptions which arise according to the concept of teaching, pedagogical practices, the role of the teacher and his mastery of the discipline for a given moment. His professional field has been modified leaving his formative position and clearly dedicated to teaching, transforming itself to a work oriented to the completion of documents and administrative formats without apparently result in an improvement in the educational process. Given the above, teacher professionalization must go further, being a professional in teaching requires a social commitment both with the teaching work and with the students, (Eirín *et al.*, 2009) affirm that teachers need to constantly reflect on learning, innovating and changing their pedagogical practices in the classroom. Teachers who present constant motivation try hard to make learning meaningful for their students and especially with students who require additional support in their learning process. However, in this field there is still much to be done (Eirín *et al.*, 2009) state:

Unfortunately, investment in professional development within the context of institutional development is far from being carried out. Most of the time many teachers still work in isolated way. The opportunities for the development of practice based on observation and criticism of that practice are very limited. Despite efforts to promote collegial culture, they are usually limited to the level of planning or teaching, rather than examining the practice itself (Eirín *et al.*, 2009)

In the Colombian context, teacher professionalization is part of the reform of the teaching career established in Decree 1278 of 2002, according to this: The new rules of training, entry, evaluation, promotion and permanence in the profession are established, which seek to influence the results of students by improving teaching quality (Bautista, 2009).

Through this decree, it is sought that teachers have the necessary training and knowledge of the area they intend to teach, also the decree allows access to teaching not only to graduates and normalistas but also to various professionals. This has led to the teaching identity in the Colombian context having changed and other types of professionals such as biologists, engineers, public accountants among others, entering the field of teaching.

From this new context, pedagogy and didactics change places, and become that means to train students in specialized knowledge; therefore, it is not necessary for teachers to spend about five years training in these areas, it is enough that some complementary courses are taken in parallel to their performance in school (Bautista, 2009). It is important, then, to reflect on these educational policies and the results of national and international tests such as PISA and SABER with the fact that teachers are responsible for these results, without taking into account that, to improve the educational process, it is necessary to strengthen teacher professionalization, since as established in the PCK the knowledge of the discipline that is taught cannot occupy a privileged place in teaching, given that both during pedagogical practice and in the initial training phase of teachers it is necessary to have the other elements that are part of this PCK such as the knowledge of the students, the curriculum, the context, the evaluation among others, through which the teachers constantly reflect and generate transformations in the classroom; and it is there in each of these contexts in which teaching and learning take place, since teachers not only acquire knowledge, but also feedback of their pedagogical practice and socialize it with their peers, where in addition to planning and pedagogical practices, research is promoted and as a consequence teacher professionalization is claimed giving value to this profession.

Emotions in teaching profession: One of the main points that can be related to the professionalization of teachers and that involves the PCK is the issue of emotions, being this of great influence for an optimal achievement of the objectives set in the educational process. Emotional education is a fundamental part of the integral formation of the personality and therefore should be presented in the preparation of all professionals who work with people and occupy a prominent role in the training of teachers. It is for this reason that aspects such as the pleasure and

motivation, interest and empathy that the teacher presents with his subject when integrating the contents with the pedagogical strategies can enrich this process, in this regard (Gallego and Nevot, 2008) highlight the relationship between the way of teaching and the way they would like to learn showing an emotional aspect.

The teacher must not only have knowledge of the discipline that teaches, but must also seek the integral formation of his students and emotions which may or may not favor the learning process; since if there is an effective communication between the teacher and the student, learning can be positive, as stated Campos (2010) when referring to the emotions of both students and teachers interrelating affecting the training process from both senses.

In accordance with the above García (2012) it maintains that:

Cognition and emotion constitute a dialectical whole, in such a way that the modification of one irremediably influences the other and the whole of which they are part. That is why in the classroom many times learning depends more on the emotion that gives the reason with which the objectives of learning are worked, and act on them. All this leads us to point out that, if the heart of the student is won, learning is practically assured. (García, 2012)

It is for this reason as they affirm (Puertas *et al.*, 2018) an emotional intelligence must be promoted in teachers through which they can assertively face all the demands and vicissitudes of the educational work of their day to day. Likewise, Hernández (2017) affirms that traditionally in educational practices it has been given relevance mainly to methodology, didactics, didactic resources, curriculum that are used in pedagogical work. Providing little attention to the emotional competences of the teacher that are part of both the initial training and the practice of this in the educational context.

Hence, Pinedo *et al.* (2017) they maintain that negative affections have an effect on the teacher's emotions generating multiple risk factors for their health at a mental and physical level, since it does not allow them to face in the best way situations of high tension or pressure in their work environment, which are inherent to their functions. Furthermore, positive affections can guarantee better mental health and consequently a better response to the challenges of their profession; therefore, it is necessary to bear in mind the emotional aspect in the initial and continuing training of teachers.

Sixth grade social sciences Curriculum: According to guide number 7 (Ministry of National Education of the Republic of Colombia, 2004), related to the basic standards of competencies in social sciences, they are divided into three columns: approach knowledge as a social scientist, personal development and social commitment. The knowledge of the social sciences comprises 3 curricular axes:

- Relations with history and cultures
- Spatial and environmental relations
- Ethical-political relations

Taking into account the population under study, the topics addressed are aimed at the construction of competencies in students, proposed in the basic rights of learning, curricular guidelines and competency standards of the sixth grade.

5. Intervention Proposal

The proposal is made from the insertion of methodological strategies mediated by ICT and supported by the elements of the PCK, to address various topics in the area of social sciences. These contents present difficulties due to the classroom practices used by the teacher do not facilitate the student to find a direct relationship of these with their environment, in the same way these topics, present very abstract concepts, which hinders not only their understanding and learning, added to this, the little diversity of teaching strategies does not allow to generate in

the students a significant learning. It is for this reason that the study is focused on the groups of the sixth grades to apply the pedagogical strategies associated with the PCK.

As a didactic strategy, it is chosen to rely on the classroom activities with the Windows Movie Maker program, students autonomously guided by the teacher will carry out multimedia productions where they will capture at a conceptual level the development of a phase of the earth evolution, it is expected that with this strategy the collaborative learning of the students will be strengthened, not only for the construction of material as a team but for the establishment of specific roles within the work team, the intelligences of each student such as the kinesthetic, spatial and interpersonal body are experienced and strengthened. Likewise, the teacher develops her digital skills by designing strategies that involve the use of specific software, manipulating images, audio and being dedicated to guiding students in the efficient use of computer tools; Given this, the teacher not only makes use of her specific knowledge but must also appropriate other competences and contents for the planning and development of her classroom practices taking into account the context of her students, the previous knowledge, the curricular structure and the purposes and objectives of teaching.

As a work strategy is established, first the reading of the theme oriented by the teacher, to obtain the basic concepts of the subject that supports the multimedia production, then in teams the students autonomously and according with their skills decide what activities or actions they should perform for it, such as drawing, modeling, the selection of the audio, the script, and using various materials such as play-dough, paper, drawings or clip art.

Finally, each team records its animated sequence or Stop Motion through which they develop in an audiovisual and creative way the theme that will be articulated to the origin and evolution of the earth.

Subsequently, given the contingency generated by COVID19, the proposal was adapted to virtuality because neither students nor teachers could attend classes in person. The strategy of implementing ICT was no longer a proposal motivated by the teacher but a need raised by the new context.

The following table shows the tools that were used during the social science classes:

Table-1. Tools used in classes

Tool	Purpose	Proposed activity or carried out by the teacher
Movie Maker	Guide students in the design of a didactic sequence of the subject seen, through an animation made with Stop Motion	<ul style="list-style-type: none"> • Reading of a document. • Elaboration and design of a multimedia animation. • Presentation of multimedia production.
Genially	Generate audiovisual didactic resources that strengthen the understanding of the subject.	Introduction and explanation of the subject, through Genially. From animated presentations and with personalized designs. Flippity used for student interaction and evaluation.
Interactive PowerPoint	Design visual didactic resources through the elaboration of interactive PowerPoint slides	Introduction and explanation of the subject. From the use of hyperlinks and animated gifs.

Flippity with wheel of names	Generate methodological strategies that encourage the active participation of students and at the same time make feedback of the understanding of the contents.	Student interaction during topic development and feedback. By assigning turns in a virtual roulette Evaluation of the topic addressed through constant feedback
Tomi digital	Generate methodological strategies to assess the understanding of the contents	Evaluation of the topic through constant feedback, from the use of multimedia questionnaires that generate score to the participants.
Padlet	Generate methodological strategies to evaluate the understanding of the contents.	Evaluation of the topic through constant feedback. From a wall or interactive whiteboard for students.

During the execution of the proposal, a conceptual development was carried out based on the aforementioned tools, taking into account the academic training of the teacher, the standards and curricular guidelines proposed by the Ministry of National Education.

The topics addressed were: The origin and evolution of land, fundamental rights, economic, social and cultural rights, river civilizations, emergence of democracy.

The main feature of the intervention proposal was the development in two contexts, at first face-to-face, where the teacher developed her work with the groups at the established times. In a second moment the institution established the implementation of virtual learning environments through e-learning Moodle and Teams, later it was migrated to G-suite as the only institutional work platform. Given this, two scenarios are established, one in which the teacher must master the tools of each of the platforms to work (Moodle, Teams, G-Suite) and the second the teacher from her own motivation, adapted and implemented the tools mentioned keeping in mind the knowledge of the topics, the knowledge of the students, the context, the school curriculum.

6. Results

During the research process it was possible to design a pedagogical strategy, in which the teacher integrated one of the curricular themes during the first term, the remaining academic terms were worked virtually addressing all the topics and relating them to the elements of the PCK, the first intervention was carried out as follows:

The teacher provided the learning guides to the students, based on a process of search, selection and verification of contents, which clearly demonstrates that the teacher has a good command of her specific knowledge.

The teacher promoted collaborative work, based on an activity that consisted of:

- Distribution of equipment according to the skills of the students, of which the drawing and management of technological applications were privileged
- Assignment of the theme to work, guided by an autonomous work guide.
- Constant accompaniment during the development of the activity, interacting from a position of guide and leader of the training process.
- Delivery, socialization and feedback of the Stop Motion animation created by the students.

Likewise, in the subsequent development of the intervention, the teacher immersed only in the virtual environment evidenced an assertive appropriation of the contents to be taught to the extent that she put into practice these themes with various strategies mediated by ICT with which the teaching-learning process was strengthened.

With regard to the pedagogical content, the teacher made use of the technological tool Stop Motion to promote the construction of material, the exhibition and the argumentation, in addition to strengthening the teamwork of the students in the face-to-face environment. On the other hand, in virtual classes, the teacher used playful and audiovisual strategies mediated by interactive applications to explain, develop and put into practice the themes of the class, such as Flippity, Quizizz, Tomi digital, Socrative, Kahoot, Genially, Padlet., among others.

In relation to the knowledge of the students, the teacher considered the articulation of the content with the didactic strategies depending on the type of student, where their age, school grade and previous knowledge were decisive when planning the intervention and prioritizing certain methodological strategies. In addition to this, information provided in committees and periodic meetings with teachers, this knowledge was enriched by recognizing the main limitations in each group.

Regarding the curricular knowledge, the teacher correlated the contents of the curriculum of the educational institution in the area of social sciences with the planning of the intervention, which could be evidenced through the instruments of information collection, such as interview, review of class planning and participant observation, which is in accordance with what is established at the institutional level and in the national order with respect to the curriculum.

Concerning the evaluation during the research process, it was observed that the teacher used strategies such as exposure, participation in interactive activities, closed questions and questionnaires to know the degree of appropriation of the contents by the students. It should be noted that during the face-to-face intervention the evaluation focused on the creation of a product (Stop Motion animation), given the above, the teacher was interested in strengthening the evaluation process, using the aforementioned strategies.

In relation to its application, it can be said that various teaching strategies were implemented in which the elements of the PCK were taken into account, because the teacher used various sources of information regarding the conceptual field and her methodological strategies, adapting these both didactic aspects and also to the needs of the school context in which she was immersed.

The intervention contributed to the strengthening of teacher professionalization, since it allowed the teacher to recognize and to put into practice the elements of the PCK when planning, implementing and evaluating her own pedagogical practices. These elements of the PCK not only allowed her to nurture her didactic strategies taking into account who the act of teaching is directed, but also recognize the weaknesses and strengths of her process; these can be assumed as mechanisms of feedback and reflection of the improvement in teaching.

Likewise, the teacher was able to carry out all the established curriculum without altering the classroom planning or the curriculum of the institution, relating the content with the context and knowledge of the students, using various didactic strategies, the latter aspect led her to train in the management and use of different virtual applications, which were not only striking for students, but also allow to achieve the educational purpose

Regarding other evaluation strategies allowed the teacher to know in advance the weaknesses of the students carrying out timely feedback processes aimed at the improvement of the students.

From the emotional aspect, the teacher was receptive, dynamic and active, evidencing the importance of emotions in teacher professionalization, since this motivation allowed her pedagogical practices to be correlated with the elements that constitute the PCK.

On the other hand, the positive emotions that the teacher presented regarding her interest in strengthening her pedagogical practices, allowed her to improve her knowledge, her didactics and carry out this transformation in an enjoyable way, which had an impact on the classroom environment.

As a negative emotion, frustration can be highlighted, which arose from the inability to achieve an effective learning process with all students and it is clearly evidenced at the time when the students were asked about the

themes seen in class and not all of them responded in the accurate way, however, this emotion can be used as a platform to promote the search for solutions that lead to generate improvement strategies for her pedagogical practices.

7. Conclusions

The review and analysis of this research process allowed the realization of a reflection aimed at understanding the professionalization of teachers based on the elements of the PCK and executed in pedagogical practices, with the target of strengthening this professionalization, the following conclusions can be established:

The importance of teacher professionalization as a dynamic axis of the educational process, since disciplinary knowledge is not enough if it cannot be articulated in a coherent way with the didactic strategies and especially with the needs of the context in which the teacher is immersed.

The evaluation process left in evidence the weaknesses of this, given that it is perceived as a process of quantitative qualification far from the formative function of this, likewise, there is a tendency of a finalist and nonprocedural evaluation of the learning process, added to this, there is a pressure to which the teacher is compelled to evaluate from a bureaucratic position and not as an integral part of her teaching process.

The significance of ICT in the classroom is recognized, although these alone do not determine the scope of the purposes of pedagogical strategies in the classes, it is essential that the teacher has a mastery of their specific knowledge to know how to successfully integrate and become these tools in a striking and pleasant mechanism that generates meaningful learning.

The emotions in the professionalization of teachers must be visualized for their great relevance when they allow the amplification or reduction of obstacles in each one of the elements of the PCK, therefore, a motivated teacher with a positive emotional charge, manages to integrate these elements and strengthens his teaching professionalization.

Research in the school environment becomes possibly the best alternative to train teachers with a high level of professionalization with the necessary skills to reflect on their own pedagogical practices, to figure out strengths and weaknesses and to have a critical vision of education that allows them to generate notable changes in their immediate environment and enable social changes.

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