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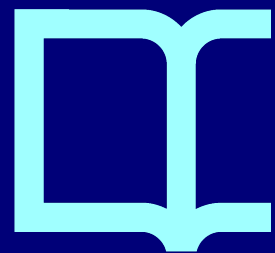
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Four types of teachers' voices on critical incidents in teaching

Abstract

This study approaches teachers' identity development from a dialogical viewpoint, focusing on what kind of teachers' voices appeared in a training course context about critical incidents (CIs) in teaching. The training course entailed the analysis and reflection of 15 CIs in online teaching from 12 participants, all of them online university teachers. The empirical element of the study was 328 written utterances voiced from participants in the virtual campus throughout the course. An analytical framework based on different types of teachers' positions in teaching, as well as a deductive content analysis approach, was used to identify different types of teachers' voices about CI in teaching. The results showed that four types of teachers' voices dominated the teachers' discourses in CI: The voices about the *classroom CIs management* and the *teaching and learning processes* (belong to the voices on the educational practice), and the voices about the *teachers' roles* and *professional development* (belong to the voices on the teacher himself/herself). Based on these results, some pedagogical implications on the teacher's identity development are discussed.

Keywords

Critical incident in teaching; Higher Education; Teacher's identity; Teacher's learning; Teachers' voices.

1. Introduction

Over the last ten years, emerging theoretical frameworks such as the Dialogical Self Theory have been generating new knowledge about how teachers develop their professional identity (Akkerman & Meijer, 2011). From a dialogical point of view, the transformation of existing teachers' voices about teaching practice is one of the most relevant mechanisms of the teacher's identity development (Author, 2016). The teacher's appropriation of new specific teaching voices and the articulation of these voices in the existing teacher's voices is a convincing way to explain the process of the dialogic construction of the teacher's identity (Vandamme, 2018).

The teacher's reflection on CIs in teaching has been successfully used to promote the teachers' learning about teaching in the classroom (Author, 2016, Calandra et al. 2009; Griffin 2003; Naidu & Oliver, 1999). The CIs in teaching is defined here as commonplace events in everyday life of the classroom that presents the teacher with a dilemma between at least two different courses of action to solve a problematic situation (Trip, 1994).

Although the way teachers may learn from CIs is a well-known field of study nowadays, little is known about what teachers really learn about CIs, and how this learning impacts in the development of their teachers' identity. This paper is aimed at enhancing our knowledge of how to build future teachers' training courses based on helping them to promote the rise of new subjective voices about CIs in teaching, and further, to improve the development of their professional identity.

2. Teachers' voices on teaching

In this theoretical section, we will define the notion of *teachers' voices about teaching* and how and where teachers may build the meanings of their subjective teaching voices. Next, we will provide some relevant examples of empirical studies that have identified different kinds of teachers' voices.

A person's voice is considered here as a set of utterances carried by an individual which reflect his subjective speaking consciousness and personality about a theme (Bakhtin, 2010). A person's voice involves a particular way of representing reality, speaking, and thinking about how to act in a social situation or how to approach a problem which may be invoked on particular occasions (Wertsch, 1991). According to Bakhtin (2010), people have multiple voices, and each individual voice will be considered a "position voice", that is to say, a speaking personality showing a particular viewpoint of the purpose of action.

Consistently, a teacher's voice about teaching will be considered as a specific form of thinking, speaking and acting which is invoked on particular occasions and situations, for example, when a teacher is talking about a theme related to teaching and learning. A personal teacher's voice is made up of many interrelated meanings (i.e. conceptions,

beliefs, and emotions) and represents a particular way of thinking and acting in connection with a particular aspect of teaching and learning (Akkerman & Meijer, 2011, Author, 2018). A significative portion of the content of the teachers' voices about teaching comes from the educational discourses which flow in social, academic, and professional scenarios as well as in educational institutions (Author, 2016). These educational discourses may be viewed as a sort of professional toolkit that allows teachers to be aware of their role and give meaning to their functions through talking and acting (Gee, 1990).

In a general sense, training courses are relevant professional scenarios where teachers can build their subjective teaching voices (Author, 2018) because they are intentionally designed to promote teachers' learning through their social participation. A specific training course aimed at teaching devoted teachers delimitates the available educational discourse in a specific map of interrelated educational teaching themes. As members of a training course community, teachers can participate in the shared construction of a meaningful discourse by selecting specific themes to talk about, *privileging* several themes in producing their utterances (Wertsch, 1991).

The set of specific themes selected by teachers conform the referentially semantic content of the course, which may show differences with the initial content course, and it becomes the real available educational discourse to teachers. The set of themes selected by teachers make visible what kind of educational discourse is essential for teachers. Furthermore, they may use this referentially semantic content merging different existing concepts and ideas using the *ventriloquising mechanism* (Wertsch, 1991), allowing teachers to produce new and personal creative voices regarding the initial subject content course.

In these teachers' training scenarios, we may consider that they learn when they can incorporate external educational discourses as a way to let other voices become a more structural part of their own thinking and reasoning (Akkerman & Meijer, 2011). This fundamental mechanism of learning has been named *appropriation of meanings* by Bakhtin (1986). It implies for an individual teacher that they can weave academic and professional discourses on an educational theme into their own voice and these new

voices would be used in social contexts according to the teacher's personal intentions and purposes (Bakhtin, 1986).

Previous studies show different classifications of teachers' voices about teaching. For example, Leijen and Kullasepp (2013) used two types of student-teachers' voiced positions (each one with its own subset of voices), named professional position and personal position, which were used by student-teachers when they tried to solve teaching dilemmas. With a slightly different perspective, Stenberg, Karlsson, Pitkaniemi, and Maaranen (2014) identified four student teachers' positions. A particular teaching voice characterised each one. The *values position* includes basic teaching matters and issues such as fairness, impartiality, and equality, as well as highlighting the role of the teacher as educators. The *practice position* includes voices of three interrelated positions concerning teaching practice: the *pedagogical interaction position*, the *didactic position*, and the *content position*. The *teacher position* contains voices of teachers themselves, for example, with the teacher's personal qualities. Finally, the *context position* deals with ideas about the teacher's working environment.

Furthermore, previous studies also show particular classifications of teachers' voices related to specific activities of teaching. For example, Author (2016) identified nine ways of creating teachers' professional voices, such as analysing an aspect of teaching by using categories belonging to a theoretical classification or the meaning of a theoretical concept, and interpreting a real teaching situation by using theoretical terms. In the same way, Author (2018) characterised five types of university teachers' voices regarding learning assessment, which were named: conception of learning assessment; the object of learning assessment; learning assessment timing; learning assessment agents and learning assessment procedure.

3. Teachers' reflection on critical incidents in teaching

We will begin this theoretical section by providing some relevant examples of studies focused on the use of CIs to promote teacher's learning in training courses. We conclude by underlining the limitations in the existing studies in this field. Finally, we will present the main objective of our study.

Over the last fifteen years, CIs in teaching have been used as a subject content in a wide range of activities to promote the teacher's learning, with the majority using them through reflective practice (Francis, 1997; Trip, 1994). Research conducted in this issue has focused on obtaining two main findings, that is to say, what teachers may learn thinking about CIs and how high levels of teachers' reflection can be achieved.

Within the framework of preservice teacher education programmes, CIs in teaching have been used to provide opportunities for participants to reflect on authentic teaching experiences to increase the capacity of preservice teachers to develop reflective and critical thinking skills (Griffin, 2003). The results of this training programme revealed the emergence of three interrelated student-teachers' attributes, referring to a reflective practice called: *open-mindedness, responsibility, and wholeheartedness about teaching*.

A further training proposal based on teachers' CIs has been developed to promote reflective practice on ethical dilemmas (Shapira-Lishchinsky, 2011). Although the main findings focused on identifying categories of CIs, the study also revealed that this kind of teachers' reflection has a limited impact on teachers' learning. More clarification about teachers' ethical knowledge and subtended values and beliefs would be needed to make the discussion of the moral dimension of the teachers' task possible.

In a different direction, Peterson (2007) analysed the process of the teacher's reflection on their CIs in teaching and reached three conclusions. Firstly, the reflective practice involved a discussion about the meaning of "a good teacher" and included personal theories and belief systems. Secondly, the CI showed the gap between the teacher's real performance in the CI and the teacher's ideal performance consistent with the teacher's belief system. Thirdly, the level of teacher reflection goes up in direct proportion to the shift from real to ideal teacher performance.

The conversational process used by teachers to reflect on CIs has also been identified (Harrison & Lee, 2011). Findings suggest that the best way to promote the increasing critical reflective practice is not to concentrate on theoretical concepts and instructional strategies, but instead on the use of conversational skills that recognise the personal dimension in the student-teacher and the management of their emotions related to teaching practice.

The process of reflection on action in teacher education using CIs has also been examined in online learning environments (Wopereis, Sloep, & Poortman, 2010). Using the weblog technology and analysing students' contributions, findings showed that, although this technology supports the reflective process suitably and encourages interconnectivity in groups of students, high levels of deep reflection or spiral reflection were not achieved. More recently, CI analysis has already been used to promote student teachers' professional learning (Chien, 2018), to promote the professional development of in-service teachers (Yu, 2018), and to describe the significance of CIs to develop both the identity and agency of a preschool teacher (Sisson, 2016).

According to the theoretical framework adopted here, the main aim of this research is to get a comprehensive view of the new types of *teachers' voices on CIs in teaching* adopted by teachers when they attended a training course based on the teacher's reflection on CIs. This information will be useful to acknowledge the degree to which they change their teacher professional identity.

4. Method

A qualitative, deductive content analysis process (Flick, 1998) was adopted in this study. Content analysis is an approach that has proved useful when examining data from teachers' self-reports (Borg, 2006) and online forums (Naidu & Oliver, 1999). We will do it by categorising and classifying all the utterances voiced by teachers about the concepts, ideas, and points of view related to CIs in teaching when they are attending an online training course.

4.1. Research questions

This study approaches teacher learning from a dialogical viewpoint and is aimed at broadening our understanding of voices, which revealed teachers' changes on CIs in teaching. In order to fully understand this issue, two research questions were identified:

Research question 1: What types of teachers' voices are used by teachers regarding critical incidents in teaching?

Research question 2: What are the main themes that characterise each type of teachers' voice regarding learning on critical incidents in teaching?

4.2. A professional training course

A professional course was created for this study in the context of an in-service university teacher education programme at the Open University of Catalonia (UOC, <http://www.uoc.edu/portal/en/index.html>), in Spain. The main aim of the online course was to create a virtual community of teacher-learners researching the subject content of CIs in online teaching. Trainers expected participants to develop a professional discourse about CIs in teaching, at both a theoretical and practical level.

The course included four content modules. The first module seeks to provide a more sophisticated professional discourse about teaching online and includes three interrelated issues: teachers' roles, teachers' approaches, and teachers' feelings about teaching online. The second module includes a complete definition and description of CIs in online teaching. The third module contains several classifications and examples of different types of CIs in online teaching. Finally, the fourth module encompasses a guideline to analyse real CIs in online teaching. This guideline is called PANIC (in Spanish: *Pauta para el Análisis de los Incidentes Críticos*), which is an analytical tool specially designed to analyse CIs, and implemented previously by Monereo, Weise, and Alvarez (2013).

The entire online course lasted fifteen weeks and comprised three large learning assignments. In the first one, with a duration of three weeks, participants read the first module, contributed collaboratively in a virtual discussion to characterise the main themes, and ended by elaborating a single document summarising the meaning of these themes. In the second learning assignment, which also lasted three weeks, participants analysed and discussed, in four working groups, three prototypical CIs in online teaching, created by the instructor (Annex 1). Participants used the PANIC guideline to analyse each CI, sharing interpretations about CIs and discussing alternative ways to solve each CI. Finally, in the third nine-week learning assignment, participants started

describing a personal and real CI from their own teaching experiences and then discussed every CI within the same four working groups. All discussions were designed in the context of computer-supported collaborative learning (Naidu & Oliver, 1999), and following the principles of CIs in teaching (Francis, 1997). Each discussion followed four steps: (a) describing a personal CI, (b) presenting the CI to peers, (c) sharing interpretations about the CI and receiving constructive feedback from “critical friends” about ways to solve the CI, and (d) reconstructing the meaning in the light of pedagogical themes and a new understanding of personal beliefs and values provided by the group analysis.

The virtual training course was conducted on a web-based learning environment designed by the UOC, which encompasses five blocks: communication, planning, resources, assessment, and others. The content course was delivered in the resources section. Educational interaction among participants took place in the communication section, especially in the discussion forum, where participants were able to work asynchronously by writing messages and sharing documents.

4.3. Participants

The participants were intentionally recruited from a pool of teachers, who acted as learners in the training course described above. For this reason, they were expected to develop a large number of different types of voices on the subject of CIs in teaching. Twelve associate teachers at the Open University of Catalonia, all being online instructors that teach at an undergraduate level, participated voluntarily in this study and were free to drop out once the study had begun. Seven participants were male, and five were female. The average age was 40 years. All lecturers graduated with a master’s degree. Six lecturers teach in the field of engineering, five in the field of psychology and education, and one in the field of economy and business. Three teachers had less than one year of teaching experience, two teachers had between one and three years of teaching experience, and seven teachers had more than seven years of experience. All teachers attended a compulsory course on online teaching when they started working at the UOC, and before this course, none were conversant in the issue of CIs in teaching.

4.4. Data collection

The data were collected from February to December 2012, complying with the Open University of Catalonia's ethics requirements, with standard informed consent procedures being followed throughout the study. We used two different sources to collect data because the written contributions of both of them reflect the "new teachers' voices" adopted by the teachers who participated in the course about the subject.

Firstly, the written contributions on the forums of all working groups were used. In total, data from fifteen working group discussions about CIs were collected, with a total of 280 contributions, and an average of 149.5 words in every written message.

Secondly, a set of three in-depth written self-reports per participant were collected. Participants answered the written self-report three times: at the end of the first phase, at the end of the course, and six months after the course had finished. Each self-report has two open-ended questions: 1) Do you think that your understanding of what it means to be a university teacher has changed? If the answer is affirmative, in which aspects? 2) Do you think that you are now more capable of facing existing and future problems and conflicts in your online teaching practice? If the answer is affirmative, which aspects of your approach to facing conflicts and problems in teaching have changed? Each answer of the two questions ranged from 50 to 600 words.

4.5. Data analysis

All data collected from the teachers' self-reports and online forums capture the participants' voices about changes in their online teaching as a consequence of their participation in the professional training course. In order to categorise data, the Atlas/ti 6.2 software was used. Both research questions were answered by identifying teachers' voices following five steps. Firstly, we removed textual fragments written by participants but not related to changes in online teaching. Secondly, we segmented textual data in thematic units, which maintain the meaning of each textual fragment (Bakkenes, Vermunt & Wubbels, 2010). Thirdly, we opened codification of all textual fragments according to their content. Each code corresponds to one type of change in the teacher's voice. Fourthly, we did an axial categorisation of textual fragments, in such a way that initial categories were refined. In this step, each textual fragment was

codified using three numbers. For example, textual fragment codified as [04:02,17] was produced by participant 4 and corresponded to self-report number 2 and thematic unit number 17. Fifthly, we did a selective categorisation of thematic units, grouping and allocating each textual fragment using the final categorisation.

The classification of Stenberg, Karlsson, Pitkaniemi, and Maaranen (2014) was used as a starting point to determine the categories of teachers' voices (Table 1). Besides, the final categories used to classify the teachers' voices emerged from the data (Table 2).

[Table 1]

Two independent analysts rated 20% of all the thematic units. The inter-rater agreements between the classification of researchers and each one of the two independent analysts were 86.1% and 83.3%, respectively.

5. Findings

Results showed that four main types of the teachers' voices dominated the teachers' voiced utterances about CIs. Table 2 summarises these findings.

[Table 2]

Voices on educational practice are the category with the most significant number of thematic units (75%) and include two subcategories. *Voices on classroom CIs management* reflects the teachers' main concern about CIs in teaching (70.7% of thematic units) and encompasses themes on how CIs resolution is to be handled by the teachers. *Voices about teaching and learning processes* (29.3% of thematic units) include themes related to how teachers linked CIs with instructional and emotional strategies.

Five themes have been identified within *voices about classroom CIs management*. The categories *understanding a CI* (39.7% of thematic units) and *being shocked at facing a CI* (21.8% of thematic units) are those that more frequently appeared. The former

comprises voices related to how teachers understand the concept of CI and its relationship with teaching, and the latter includes voices referring to feelings experienced by the teachers when facing CIs. The three remaining themes (with a similar number of thematic units: *planning Actions*, 14.4% of thematic units; *monitoring actions*, 10.3% of thematic units; and *assessing actions*, 13.8% of thematic units) contain voices regarding the interpretation of CIs and the different potential ways of action to solve the CIs, the teachers' monitorisation of CI process solving, and the teachers' final self-assessment of their actions in solving the CIs.

Two themes have been identified regarding *voices about the teaching and learning processes*. The category *didactic strategies* (45.8% of thematic units) is linked to the voices of the teachers' understandings about their "instructional toolbox" with which they develop their teaching. The category of voices on *emotional strategies* (54.2% of thematic units) contains discourses about their ability to manage emotions in teaching.

The *voices on the teacher himself/herself* contain a set of teachers' voices which refer to themes about the teachers themselves and their self-understanding. The category *teacher's roles* (the most common, with 84.1% of thematic units) includes voices related to prototypical tasks that a teacher must usually develop. The category *professional learning* (15.9% of thematic units) contains voices referring to how the course impacted on their professional learning.

Overall, the findings revealed that the teachers' participation in the professional training course did not affect the entire range of possible new teachers' voices. Whereas it influenced most issues regarding educational practice (except for voices about the pedagogical interaction, and the content expert), and the teacher himself/herself, there was no evidence of any influence concerning fundamental teaching matters and educational context. These findings suggest that reflective practice about CIs enabled teachers to become deeper cognisant of their own professional experience (Yu, 2018), but only about specific teaching themes.

Next, we will show the main themes that characterise the types of new teachers' voices regarding teachers' changes in critical incidents in teaching. We have organised the presentation of the themes as follow. Firstly, we will show the themes related to the

voices on educational practice, which include the voices of both the classroom CIs management and the teaching and learning processes. Next, we will present the themes regarding the voices of the teacher himself/herself, which include the voices of the teacher's roles and professional learning.

Voices on educational practice. Classroom CIs management. Understanding a CI

This category contains changes in voices about four different issues concerning the teachers' understanding, attitude, knowledge, and level of analysis of CIs. The first type of voice includes the teachers' meanings of a CI itself. We refer to two different teachers' changes. The first is related to the causes that provoke the emergence of a CI, the students (textual fragment A) and the teaching work itself (textual fragment B).

Textual fragment A: "Before, I considered teaching conflicts or problems to be something caused by students or being the fault of students. Right now, I believe that a CI is a combination of circumstances that come from the students, from my teaching-learning proposal, from subject content, from the criteria and the way I assess learning, from the interaction among students... In other words, I interpret CIs from a wider perspective; that can only be explained by considering the impact of several factors." [08:01,01]

Textual fragment B: "Right now, I understand CIs as part of my work as a teacher. I believe they are indispensable; they are manageable, and that they are another resource that can be used to improve my teaching." [03:01,01]

The second is related to their bi-directional attitude when facing CIs. Textual fragment C is referred to avoiding negative feelings, and textual fragment D is referred to keeping an emotional distance with the situation.

Textual fragment C: "Before negative feelings affect our teaching, we should assess which are the motives and acts that caused this CI, to analyse them, and then to act accordingly, avoiding our reply to become automatic and impulsive, and thereby causing a conflictive situation between the teacher and the students." [02: 10,01]

Textual fragment D: “The attitude will require keeping an emotional distance when analysing CIs and, as a consequence, we will approach them from a more reflective perspective. I notice that this emotional distance helped me, in conjunction with all the theoretical knowledge, by analysing CIs knowing and sharing experiences with my colleagues.” [08:02,04]

The third change in the teachers’ understanding of CIs alludes to expanding the teachers’ knowledge about nature and the types of CIs (textual fragment E). The fourth type of this teachers’ voice focuses on the level of perspective in which teachers analyse the CI itself (textual fragment F).

Textual fragment E: “The course helped me to improve the interpretation of CIs or problems, to identify them, classify them, and understand them from new points of view.” [01:01,01]

Textual fragment F: “I will analyse CIs from the perspective of both students and teachers, expanding my analysis at an institutional level.” [08:01,03]

Voices on educational practice. Classroom CIs management. Planning actions

Two more common kinds of issues that crowded these voices are related to the interpretation of the educational situation and the proactive teacher thinking about potential alternatives to solve the CIs. Textual fragment G illustrates how the teachers, as a first step, analyse the situation in which a CI has developed. Textual fragment H refers to the alternatives that teachers have in order to solve CIs.

Textual fragment G: “As a first step, I would analyse the situation. What background is there? Who participates in the conflict? Which factors caused it? How could the conflict be solved? (Are there different ways to solve it?), and then assess every way to solve it. If applicable, what will be the possible resolution, will it be negative or positive, and so on.” [05:01,01]

Textual fragment H: “Analysing the potential ways to solve the CI: Will modifying X be useful to solve the CI? Is X modifiable? If yes, we should plan the introduction of the change very carefully, in order to avoid another CI. If not, what is the cause of it? If the answer remains negative, we should find new options.” [08:03,01]

Voices on educational practice. Classroom CIs management. Monitoring actions

Voices in this category are linked to issues about how the teacher monitors solutions in facing a CI and about some specific characteristics of the teacher’s monitoring action. Textual fragment I underlines the importance of acting more systematically, and textual fragments J and K emphasise two teacher action characteristics, such as speed and number of affected students, respectively.

Textual fragment I: “The way to manage the CI has changed. Before it could be more intuitive, from now on, it will be more systematic.” [01:04,03]

Textual fragment J: “Another important aspect for me is the speed of action in front of the CIs.” [06:04,03]

Textual fragment K: “The point is trying to solve the problem directly before it escalates and affects the minimum number of students.” [11:04,03]

Voices on educational practice. Classroom CIs management. Assessing actions

This category involves voices related to two issues: the necessity of assessing the outcomes of the teacher’s actions and the importance of potential feedback for future teaching. Textual fragment L stresses the importance of ensuring the actual resolution of a CI, and textual fragment M is related to the potential improvement in teaching as a result of assessing past teacher actions when addressing a CI.

Textual fragment L: “The aim is not just to solve the problem, but also to verify that the solution has truly solved the problem. Therefore, the CI is not

closed after the teacher's answer; it is necessary to verify that this is the correct answer." [02:05,02]

Textual fragment M: "The subsequent process of reflection and assessment [of the CI] will allow me to detect any potential improvement in the management, thus becoming a cycle of ongoing improvement in solving CI." [04:05,02]

Voices on educational practice. Classroom CIs management. Being shocked at facing a CI

The final category contains changes in the teachers' voices related to four emotional issues about CIs: the teachers' attitude, the teachers' emotions, the teachers' communication with their students, and the teachers' emotions at the end of a CI. In Textual fragment N, the teachers mentioned that they would have a more positive and tolerant attitude in front of future CIs. In textual fragment O, they also indicated that they would have more emotional control in their actions in future CI situations. As shows textual fragment P, the relationship between emotions and communication in the teacher-student interaction is another reflection of the teachers. Finally, textual fragment Q reveals that the teachers also think that they will experience more positive emotions when solving future CIs successfully.

Textual fragment N: "I will try to be more open and respectful with the learners, trusting them, encouraging them and offering them powerful learning tools and strategies that allow them to overcome their difficulties." [01:05,01]

Textual fragment O: "Facing CIs without emotions like anxiety or stress has a consequence: I will solve them more efficiently" [05:02,01]

"When I have to solve a CI, I will act more systematically, and I believe it will be easier to control my emotions when responding." [11:04,02]

Textual fragment P: "I believe that, in order to solve the CIs, good communication (with students) is the best way to reach an agreement. In this

way, I will try to establish a friendlier relationship with the students.”
[02:04,01]

Textual fragment Q: “I expect to feel more satisfied having faced, managed and solved the CI.” [06:06,02]

Voices on educational practice. Teaching and learning processes. Didactic strategies

The teachers’ voices in this category are linked to issues about their understanding of teaching instructional strategies. Two teachers’ voices appear more frequently in this category: Changes on the entire instructional strategy, and changes in a specific aspect of instructional strategies. Textual fragment R illustrates a profound change, from narrow to extended comprehension, on the meaning of the entire online teaching and its relationship with learning. Textual fragment S involves specific changes in instructional strategies, mainly related to the teaching-learning process.

Textual fragment R: “Conversely to when I started the course, at the moment, I understand that teaching is not only transferring knowledge in a classroom, but also being able to communicate, understanding the new needs of students at present, and having empathy in order to put yourself into the student’s shoes before taking other factors for granted.” [02:08,01]

Textual fragment S: “Several changes should, in many different ways, be targeted towards the maximum number of students, offering a wide range of learning procedures, and also assessing at the beginning, during and at the end of the learning process.” [07:09,02]

Voices on educational practice. Teaching and learning processes. Emotional strategies

This category involves changes in the teachers’ voices related to the affective dimension of online teaching. Textual fragment T is related to the teachers’ understandings about the importance of the students’ feelings in teaching and learning. Textual fragment U shows a more profound emotional change, not only related to the students’ emotions but also with the teachers’ emotions about their teaching.

Textual fragment T: “It is crucial to consider the students’ emotions and the social atmosphere of the classroom as a core aspect while developing teaching-learning activity.” [12:03,01]

Textual fragment U: “Such feelings [of the teachers] as getting frustrated or irritated with their students have been left behind; right now, the most important aspect is to identify with the students’ perceptions and try to connect with the students’ expectations more appropriately.” [11:10,02]

Findings showed that teaching aspects that changed due to the participation in an online course about CIs go beyond the acquisition of knowledge or the development of a particular teacher’s asset. As other contributions emphasise (Chien, 2018; Mohammed, 2016), we found that the teachers’ reflection about CIs in teaching mainly provokes the emergence of new teachers’ voices related to how teachers understand the CIs, how they develop instructional strategies and teaching and learning processes, and how they manage and solve CIs. Besides, findings also revealed the high importance of the emotional dimension in the management of CIs in teaching (Harrison & Lee, 2011).

Voices on the teacher himself/herself. The teacher’s roles

The examples of the changes in the voices belonging to this category concern major professional prototypical activities, which emphasise changes in three issues: to become an online teacher, to extend the number of the teacher’s roles, and to expand the understanding of a specific teacher role. In textual fragment V, teachers indicated the importance of changing the vision of what teaching means concerning the teacher’s roles when moving from a face-to-face scenario to online teaching. In textual fragment W, they mentioned that, after the course, they were more aware of the complexity of the activity that involves being a university teacher. Finally, in textual fragment X, teachers noted that they had expanded their previous understanding of the teacher’s role in particular, for instance, on the teacher’s managing role.

Textual fragment V: “I think an idea or rather an intuition emerged. There was a change in my teacher’s role. When you come from face-to-face teaching, you tend to disregard other teachers’ roles that are very important when not having students there physically in front of you. For instance, the role of social facilitator, technician or organisational problem solver.” [10:08,01]

Textual fragment W: “I am now more aware of the multiple and varied tasks that a teacher has to develop, which range from teaching to managing and researching.” [07:08,02]

Textual fragment X: “At the moment, I am more aware of the importance of the managing role, that is to say, the need to conduct at the different moments of the teaching-learning process: planning, monitoring, and closing, and how this conducting performs a preventive function in the emergence of CIs.” [08:07,03]

Voices on the teacher himself/herself. Professional learning

The teachers’ voices in this category deal with two issues related to professional learning; both of which refer to the impact of the teachers’ reflection on CIs in teaching. Textual fragment Y focused on the benefit of the teacher’s teaching in a general sense. Besides, textual fragment Z refers to the potential gain in the way in which teachers do their online teaching design.

Textual fragment Y: “As in the beginning, but with subsequent analysis and collected feedback, the course will help us to extract reflections and valuations on the entire process, and also be able to apply the necessary changes, in order to carry out an ongoing improvement in online teaching.” [11:05,01]

Textual fragment Z: “The design phase is when you should consider potential CIs and, therefore, try to avoid them before they emerge. For instance, if there are complex learning activities that could be seen as a

problem by students, you should previously plan additional educational assistance in order to minimise these kinds of situations.” [11:03,01]

Initially, these findings would be considered unexpected results because it does not seem to have any relationship between CIs in teaching and the appearance of new voices about the teacher’s roles and professional teacher learning. In a close view, what it reveals is the obvious relationship that it can be established between the set of the course contents and the types of emerging teacher’s voices (Author, 2016), as well as that the voices on the teacher himself/herself are less privileged by teachers than the voices on educational practice (Wertsch, 1991).

6. Conclusions

This study approaches the teachers’ identity development from a dialogical viewpoint focusing on what types of teachers’ new voices appeared in a training course about CIs in teaching. Empirical data allow us to state two significant conclusions, related to the impact of the teachers’ professional course on teacher identity, and the utility of the coding scheme framework used to examine the teacher identity development.

First, findings revealed that the content of the training course had had a significant influence on the emergence of specific teachers’ voices and, consequently, on a teachers’ way to develop his/her identity. We have provided evidence through participants’ answers of there is a clear correspondence between the four types of course contents described in the corresponding section and the types of new teachers’ voices regarding teachers’ changes about CIs in teaching. Other authors reached the same conclusion when included other course contents. For example, Shapira-Lishchinski (2011) revealed that a course designed to promote teachers’ reflection using CIs based on ethical dilemmas promoted the emergence of voices about fundamental teaching matters.

Second, this study also demonstrated the utility of categories about teacher identity positions initially proposed by Stenberg et al. (2014) and afterwards developed by Stenberg and Maaranen (2020), and Maaranen and Stenberg (2020). The coding scheme

can be useful not only to analyse teacher identity based on practical theory and beliefs but also to analyse the development of teacher identity through the teachers' appropriation of new voices about CIs in online teaching due to their participation in a training course (Author, 2016).

Keeping in mind that this is an exploratory study, we would like to point out two main limitations. Firstly, we are aware that the data collected in this study demonstrates the intention of the teachers to shift their way of teaching, but it does not reflect the real changes in their teaching practices. Secondly, since it has been a real course carried over into a more general university teacher educational programme, we have not been able to identify potential unidentified factors that may have an impact on the emergence of new teachers' voices, not only during the course but also during the following six months.

Findings may also allow us to make three considerations to extend the scope of teacher learning in reflective training courses about CIs in online teaching. Firstly, we are convinced that academic teachers' subject matter is a critical aspect of the process of reflection because CIs are highly domain-dependent. For this reason, we are convinced that it is necessary to design specific courses limited to teachers within the same field of knowledge. Secondly, we think that the situations described in each CI should be related not only to general online teaching problems but also to specific and didactic methodologies. Finally, we also advocate the inclusion, as subject content of the reflective course, of the academic rules and regulations on online teaching at the institutional level, because it is a knowledge that frames the process of planning, monitoring and assessing the resolution of concrete CIs.

Beyond this exploratory study, future research could be advanced in both methodological issues and empirical research. The dialogical approach to conceptualising the teacher's identity needs a more complex and refined analytical approach that allows us to collect more empirical evidence about changes in teachers' voices.

Disclosure statement

No potential conflict of interest was reported by the authors.

Statements on open data, ethics, and conflicts of interest

This research paper was developed in accordance with the ethical standards of the American Psychological Association (2010). The participants were informed in advance of the general aim of the research, its duration, and the procedure to collect, store, and analyse the information provided by them.

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Annex 1. Text on the prototypical critical incident number 1 in online teaching

Isabel starts her professional career as an online university teacher by designing a small group learning activity. Her expectations are quite high, as she has recently finished an online university teaching training course and thinks that she has learnt a lot about the student-centred learning approach and collaborative learning.

With these pedagogical principles of reference in mind, she proposes her students in the virtual classroom to do a cooperative assignment, which has to be solved with the collaboration of all the four members of every group.

A week after the beginning of this learning activity, she receives many messages from students complaining that, in their group, cooperative learning is not working out, and many students feel that they are wasting their time. Below there is an example of one of these emails received by the online teacher.

Dear Isabel,

As you have seen, in group 2, only Judith and I are participating, and the other two members so far have just sent an email to introduce themselves. I personally enjoy working in a group very much as long as everyone contributes significantly. In our case, it is evident that we are going nowhere, and we only have seven more days to finish the group assignment. I would really appreciate it if you could help us solve this situation.

Yours sincerely,

Lidia

The online teacher, facing the vast number of messages that she is receiving, decides to send a new message to her students with the following content:

Dear students,

I am aware that the collaborative assignment that I proposed for this learning activity has not worked out in many groups. Therefore, I now inform you that students can do this assignment individually if they prefer to. You should send me your assignment on the same deadline date.

Yours sincerely,

Isabel