Investigating the Impact of Greek EFL Teachers' Participation in Online Communities of Practice as a Means of Professional Development

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Abstract

This paper examines EFL teachers' participation in online Communities of Practice (CoPs) and its impact on their professional development. The study focuses on 50 EFL teachers who became members of CoPs using an online platform named *2gather* developed by the University of Athens in the context of a national in-service professional development project in Greece. Founded on the theory of situated learning, CoPs have been defined as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al., 2002). The study involved monitoring the development of four CoPs and teachers' patterns of participation using a mixed-methods approach which combined quantitative data and qualitative research of collective case studies (Dornyei, 2007) of different groups of teachers. A comparison of teachers' exposure to meaningful professional development (Franke et al., 2001) activities "before" and "after" their participation in the CoPs was carried out. In addition, results suggest the existence of statistically significant associations between the teachers' participation in online CoPs and perceived benefit and change of their beliefs and/or practices. They also highlight the specific conditions that have supported their reflection, their reported reconstruction of beliefs and practices and the reported effectiveness of their training experience in relation to their teaching practice. The findings contribute to furthering our understanding of effective implementation of online CoPs in the context of continuing professional development.

Keywords: professional development, communities of practice, teacher change, effectiveness of training.

Introduction

Teachers are required to constantly adapt their pedagogy to new theoretical approaches in order to pursue their professional development and improve their classroom practices. However, serious doubts exist about the effectiveness of traditional teacher education courses since they have been widely criticized for failing to "provide teachers with sufficient time, activities, and content necessary for increasing their knowledge and fostering meaningful changes" (Garet et al., 2001, : 920). Reforms often fail to provide effective PD that promotes perceived teacher change (Darling-Hammond & McLaughlin, 2009, Kourkouli, 2015). They usually take the form of short-term, "spray-on PD" seminars (Day & Sachs, 2004) creating thus a need for an alternative solution.

One model that has evolved as a way of supporting this paradigm change is that of professional Communities of Practice (CoPs). The premise underlying this paper is that the use of online Communities of Practice may present a real solution to the failure of current education programmes in contributing to the professional development of teachers and reported effectiveness of the training experience in relation to their teaching practice. Thus it is the intention of the present paper to investigate this potential in the Greek context.

In-service teacher education policy in Greece, under the authority of the Ministry of Education, is highly bureaucratic and centralized, not leaving any space for initiatives. Teacher training usually takes the form of non-compulsory 3-hour seminars which are carried out by School Advisors, public school teachers selected and appointed by the Ministry. Teachers do not participate either in the design or the development of their training while the broader context of training policy in Greece is characterized by lack of coherence, continuity, flexibility, failure to respond to teachers' needs (Vergidis et al, 2010) and ineffectiveness (Kourkouli, 2015). Although various efforts have been made throughout the years for a more decentralized and flexible teacher education policy, they were never implemented (Pedagogical Institute of Greece, 2009).

Since Communities of Practice constitute an innovatory form of teacher development, involvement in the ELTeachers CoPs was seen as a catalyst for Greek EFL primary school teachers towards their professional development while at the same time addressing their needs.

Therefore, the purpose of this paper is to investigate the professional development of 50 Greek EFL teachers participating in four online Communities of Practice using an online platform named *2gather* developed by the University of Athens in the context of a national in-service professional development project in Greece to acquaint teachers with teaching English to young primary school learners. Firstly, it is intended to compare teachers' exposure to meaningful professional development (Franke et al., 2001) activities "before" and "after" their participation in the CoPs. Secondly, it establishes associations between the teachers' participation in online CoPs and perceived benefit and change of their beliefs and/or practices. Thirdly, it is attempted to highlight the specific conditions that have supported their reflection, their reported reconstruction of beliefs and practices and the reported effectiveness of their training experience in relation to their teaching practice.

The research was conducted within the paradigm of a mixed-methods design which combined quantitative data and crosstabulation with qualitative research of collective case studies (Dornyei, 2007) of the four ELTeachers CoPs.

The investigation of the impact of the Greek EFL teachers participation in the ELTeachers CoPs on their professional development during their first official launch (December 2014 – May 2015) contributes to furthering our understanding of effective professional development implementation. It also proves them to be an effective and sustainable catalyst for teacher learning, reformed teaching practice and reported effectiveness of the training experience in relation to teachers' teaching practice. In addition, it can serve as a springboard for other educators and possibly pave the way for a true paradigm shift in teacher education.

Literature review

Professional development of teachers

As the main purpose of the paper is to identify and describe the role of online Communities of Practice in the professional development of teachers, this chapter will begin by addressing the notion of professional development in terms of teacher learning and change. In Freeman's (1989) view, teacher education constitutes a superordinate term that encompasses both teacher training and teacher development as different strategies by which teachers are educated. Training is based on a process of direct intervention, leading to the mastery of specific knowledge and skills and is based on external criteria for assessing teachers' change. On the contrary, teacher development implies an idiosyncratic and individual process of influence encouraging some sort of increase or shift in teachers' awareness which can be non-evaluative by external criteria. Therefore, any course focusing on the education of teachers should feature elements of both training and development in order to bring about some sort of change in teachers' beliefs, attitudes and teaching practices.

Within the last decades, educational reform efforts have been directed to seek professional opportunities for teachers that will help them enhance their knowledge and develop new instructional practices (Borko, 2009). There has been a paradigm shift gathering momentum with regard to the professional development of teachers. As Moore and Barab (2002, p. 44) state "professional development is not something you receive, but something in which you participate as part of your everyday activities" since learning is a participatory process that involves "doing, becoming and belonging, not simply acquiring" (Ng & Hung, 2003, p. 62).

Investigating the extent to which the participation in PD programs manages to bring about language teachers' change, implies cognitive and behavioural change processes in teachers, whereby they get to alter aspects of their belief systems and practices as a result of a new input (Kubanyiova, 2012).

In an alternative normative-reeducative perspective of teacher change (Richardson & Placier, 2001), we are suggested to evaluate the impact of teacher education courses in terms of the teachers' understanding of the training content and its value and how this leads to the development of reformed practices. It also focuses on how and to what extent the teachers' practice changes as a result of a teacher education course. This view of teacher change places emphasis on the mental state of teachers and their concepts, since teachers' teaching practice and decision-making is largely informed by them. Thus conceptual change constitutes a major factor of teacher change also to be also taken in consideration in the present research.

Finally, the role reflection plays in enhancing teacher change is also to be addressed. Teachers cannot develop themselves unless they learn to develop their critical self and be able to reflect critically upon what they do in their classrooms (Liu &

Fisher, 2006). This shows that "learning and reflection are interrelated," as Brandt (2006, p. 42) argues, and that "reflection requires a recapturing of experience in which the person thinks about it, mulls it over, and evaluates it". In addition, it encourages them to take greater responsibility for their own professional growth and look for ways of becoming more autonomous professionally.

Therefore, in order to enhance the effectiveness of teacher education programs a number of principles are proposed for the design, organization and implementation of teacher education courses (Kourkouli 2015) such as the exploration of teachers' personal practical theories and beliefs (Levin & He, 2008) at the pre-training stage, enhancing the relevance of topics, restricted use of the lecture mode for presenting new information, emphasis on reflection, experiential elements such as micro-teaching, self and peer-observation as well as demonstration techniques, collaborative learning in pairs or groups, exploratory learning in workshops and provision of continuous follow-up support to equip trainees with the knowledge and confidence required to implement new theories in their everyday teaching practice.

Online Communities of Practice and situated learning

Online Communities of Practice (CoPs),founded on the theory of situated learning (Lave & Wenger, 1991), have been defined as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al., 2002, p.4). Social constructivist theories view learning as a process situated in a social context where knowledge is "constructed" by the participants (Kimble et al. 2008). The theory of "situated learning" is rooted in Vygotsky's cognitive theory (1978) positing that learning is embedded within an activity, context and culture. It can also be unintentional rather than deliberate. Knowledge needs to be presented in authentic contexts — settings and situations that would normally involve that knowledge. Social interaction and collaboration are essential components of situated learning — learners become involved in a "community of practice" which embodies certain beliefs and behaviors.

In Mezirow's transformative learning (1991), "critical reflection" emerges as a precondition for learning.When faced with a disorienting dilemma, people are forced to reconsider their beliefs in a way that will fit the new experience into the rest of their worldview. This often happens in the context of dialogue with other people through co-operation, peer respect and fruitful communication (Eades, 2001).

It is also suggested that deep or higher-order learning occurs through collaboration when a group develops common meaning through discussion and externalization of individual interpretations (Goodyear & Zenios, 2007).

Online Communities of Practice – a new approach in teacher education

In Communities of Practice, teachers learn through focused investigation and challenging of existing beliefs and practices. As Katz et al. (2005) suggest, fostering discussions on the theory and practice of teaching can support teachers in changing their practice through a culture of critical colleagueship (Lieberman & Mace, 2009) and reflective inquiry. In particular, teachers develop by actively reflecting on their practice, interacting and collaborating with their colleagues (Sorge & Russell, 2000) in order to solve problems encountered in their classrooms (Richardson, 1990) and make changes accordingly (Kontra, 1997).

Contrary to the inefficiency of traditional training models (Levin & He, 2008), online Communities of Practice have the added element of "facilitative" technology. They can accommodate teachers' busy schedules, can account for maximum relevance and interest factors (Bax, 1995), hold the promise of creating a path toward providing real-time, work-embedded support for teachers' ongoing learning (Dede et al, 2009), can draw on powerful resources that are not locally available and can practically reach out to everybody, even in geographically isolated areas (Fishman et al, 2013). The collective results of research studies (Hollins et al., 2004; Dunne et al., 2000; Englert & Tarrant., 1995) suggest that well-developed CoPs can have a positive impact on the professional development of teachers. Effective leadership can create a supportive learning environment by creating a shared vision, encouraging and empowering members through cooperative teams (Johnson & Johnson 1997).

Method

Methodological approach

The purpose of this study is to investigate whether teachers' involvement in the 2gather online CoPs constitutes a good source of meaningful professional development for them and which factors seem to create a more conducive environment for that. In this light, a methodological approach is needed that examines the following research questions:

1) To what extent were teachers exposed to more meaningful professional development (Franke et al., 2001) activities "during" their participation in the CoPs compared with the ones "before" their participation?

2) To what extent is there reported reconstruction of beliefs and practices as well as reported effectiveness of their training experience in relation to their teaching practice as a result of this participation?

3) Which factors support perceived benefit and change of their beliefs and/or practices?

4) Which are the specific conditions that have supported their reflection, their reported reconstruction of beliefs and practices and the reported effectiveness of their training experience in relation to their teaching practice?

2.2 Study context

In order to gather the necessary data for the research described above, we developed our own authentic online CoPs with appointed volunteers EFL teachers working in the state primary education in Greece with real needs and everyday problems. For this purpose, we used the 2gather platform developed by the University of Athens. Through open source technologies, it combined features of Learning and Content Management Systems with those of Social Networking Services. The platform integrated the following facilities useful to a CoP: α) homepage b) discussion spaces to foster discussions through a closed forum for every CoP, c) private messages and public messages), d) member directory with a profile – avatar and a short bionote for every participant as well as their online status), e) chatrooms, f) medialibrary, g) activity streams) and h) groups and sub-groups (Karavas & Papadopoulou, 2014).

The whole project amounted to a monumental effort of setting up, publicising, piloting, organising launching as well as kick-off events, face and skype meetings, tutorial workshops as well as informing and training the School Advisors (the teacher trainers) on the innovative teacher education method, the specific platform and available tools. It lasted from April 2014 – June 2015. Each online CoP was composed of one School Advisor (Teacher Trainer) and as many volunteers- teachers working in the broader geographical area of their School Advisor's jurisdiction, sometimes a whole Prefecture. The CoP training schedule and material was based on reported teachers' needs and was given to the School Advisors as a "guidebook" for further development or, as it mostly happened, a step-by-step implementation procedure, which practically meant that it was fully adopted by the School Advisors and implemented with very little content and structure variation. School Advisors posted one monthly activity in each CoP's forum divided in two fortnight sections with strict deadlines and specific ground rules designed to multiply interaction. The first section was designed to foster reflection and practice-related integration with posts and accompanying studying or viewing material. The second section was meant to foster the development of open discussion and the connection with teachers' everyday practice through new posts, continuous provision of feedback and open interaction among the participants. We created and posted the following topics as monthly activities 1. Introductions; 2. Teaching Context; 3. Multiple Intelligences and Learning Styles; 4. Classroom Management; 5. Increasing student motivation/Developing positive student – teacher relationships; 6. Differentiated instruction; 7. Project work on lesson planning.

2.3 Participants

The research was conducted by the author of this paper, Katerina Kourkouli.[1] Following Cambridge et al.'s example (2005), we assigned the roles as follows:

1) Administrator–Leader: Katerina Kourkouli, researcher at the English Department of the University of Athens, responsible for the setting up of 4 online CoPs all over Greece, registration procedures, training modules, moderators' training, support, contact, organizing face-to-face, Skype and kick-off meetings with School Advisors and participating teachers, explaining the philosophy, publicizing the training innovation and addressing every technical or other issue that might arise.

2) Moderators: 4 state EFL School Advisors assigned their own CoP (A' Athens, Kalamata, Chalkida and Ioannina named after the capital city of the geographical region) based on their administrative jurisdiction, responsible for training, supporting, encouraging the participants and providing feedback. In fact, one of them, Chalkida CoP's School Advisor opted to acting as a supervisor with a chosen teacher of her jurisdiction acting as a Moderator/Contributor instead of her.

3) Participants: 50 EFL state school teachers working in the primary education (A' Athens CoP 16, Chalkida CoP 16, Ioannina CoP 6, Kalamata CoP 12 teachers) who consented to answer the "before" the CoP participation questionnaire

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anonymously and registered to participate in their area CoPs. They were informed that it was meant to serve as a research tool and baseline investigation[1] resulting finally in 49 EFL state school teachers working in the primary education who participated voluntarily and actively throughout the training period, in their authentic contexts, fulfilled the criteria in terms of workload and projects submitted specified by the CoP program and answered the "after" questionnaire (A' Athens CoP 16 teachers, Chalkida CoP 15 teachers, Kalamata CoP 12 teachers and Ioannina CoP 6 teachers). All 49 participants received a certificate of participation. Anonymity was guaranteed by their School Advisors and the researcher herself.

2.4 Data sources

As for the 1st research question, two questionnaires were constructed as tools for data collection and analysis administered "before" and "after" the CoP participation. The questionnaire, administered "before" the CoP participation is meant to serve as a baseline investigation of teachers' profiles, beliefs and classroom practices before their involvement in the CoPs program while the questionnaire administered "after" their CoP involvement is considered a tool for detecting reformed beliefs, attitudes, practices and change. Both questionnaires were constructed based on the study of variables that capture common experiences of groups of people. In particular, the use of the Microsoft Excel 2010 Data processing programme accounted for the descriptive nature of this research. In addition, "Chi-Square tests of independence" which allow us to look at two variables and evaluate the strength of their relationship or association with each other took place with the use of SPSS (Statistical Package for the Social Sciences) (Dornyei, 2007: 228).

The sampling plan for this project involved two stages and yielded a total of 50 questionnaires from November-January 2014 (the "before" phase) and 49 questionnaires in July 2015 (the "after" phase).[2]

Instrument

Information was elicited through mainly clozed-ended item types using factual, behavioural and attitudinal questions. In effect, Part I aims to build a profile of the respondents who participate in this research, especially in the areas of teaching experience with young learners. Part II focuses on the types of training experiences teachers had been exposed to "before" and "during" their participation in the ELTeachers CoPs as well as investigation of any previous experiences with other CoPs. Finally, Part III seeks to investigate the teacher education courses themselves, both the traditional ones teachers used to participate "before" their CoP involvement and the CoP course itself. This is achieved firstly by exploring the topics covered, the presence of training practices used which are regarded conducive to teacher development as well as the specific professional development activities teachers were exposed to "before" and "during" during their CoP training. Secondly, it seeks to investigate the impact of both the traditional courses as well as the online CoP course itself. This is done through the tracing of perceived teachers' knowledge restructuring, reported change of teachers' actual teaching practices as well as perceived benefit and reported effectiveness of their training experience in relation to their teaching needs and practice "before" and "after" their participation in the CoPs. Finally, focusing exclusively on the "after" instrument, we will also highlight the specific conditions that have supported their reflection, their reported reconstruction of knowledge and practices and the reported effectiveness of their training experience in relation to their teaching practice based on crosstabulation.

Presentation and discussion of results

In this section, a detailed presentation and critical discussion of results is attempted, following the research method described and the theoretical framework delineated above.

3.1 Personal and professional data

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[1] It should be noted that at the time, November 2014 – January 2015, due to austerity measures and reforms enforced in Greece in the context of its fiscal adjustment, the competent Ministers had issued a Presidential Decree No 152/5 November 2013 published in the Govenrment Gazette Vol I/No.240/pp. 4107-4132 assigning School Advisors to conduct teachers' evaluations for the first time in years with the aim to create a potential tank for future state school teachers' dismissals. They were signed as prior actions of the Second Economic Adjustment Programme for Greece in March 2012. The total number of online CoPs under my supervision amounted to 10 CoPs for the school years of 2014-15 and 2015 – 16 and the total number of participants amounted to 147. Despite repeated reassurance and affirmation on the part of the researcher and their School Advisors that their participation in the CoPs training program would not be used for their evaluation reports, the final research participants were much fewer.

[2] The "after" questionnaires were collected in a period of widespread financial and political turmoil in Greece with banks closed and capital controls imposed.

The majority of the respondents are female teachers (91%) teaching english to young learners of the first and second grades of primary school at a percentage of 61%. 26% of the respondents hold a postgraduate degree in English teaching with a further 10% in some other field. A small percentage of 22% report no teaching experience with young learners while almost 39% report more than three years teaching experience with the target age group. In addition, 70% report having attended some type of training course, day seminar organized by the school Advisor and the University of Athens or self-training in relation to teaching English to young learners. The vast majority (90%) had never participated in an organized Community of Practice before.

3.2 Description of training and teaching attitudes and practice "before" and "after" the participation in the online CoP

The second part of this presentation focuses on the teacher education courses themselves, in terms of the presence or absence of strategies and training procedures regarded conducive to teacher development. We will focus on decribing the types of training experiences teachers were exposed to "before" and "during" their participation in the ELTeachers CoPs as well as the impact of both the traditional courses and the online CoP course itself on their professional development.

In response to the first research question,

1)To what extent were teachers exposed to more meaningful professional development (Franke et al., 2001) activities "during" their participation in the CoPs compared with the ones "before" their participation?

as can be seen in Chart 1 below, in the traditional training seminars teachers attended "before" their CoP participation, the majority of participants were not involved in the identification and articulation of their needs (32%) compared with the reported identification of their needs at a percentage of 77% "during" the CoP course which is obviously more compatible with adult learning principles and learner-centred approaches. Concerning the training procedures employed, the methods the trainers used to provide data as well as the presence of experiential elements enhancing the effectiveness of training courses, the situation looks much more promising "during" the CoP course. More specifically, 65% report obtaining feedback to teaching practices "during" the CoP course while 24% answer positively concerning the "before" courses. Similarly, 42% report receiving follow – up training on new ideas and techniques "during" the CoP course , an astonishing 96% engaged in sharing resources and good practices with colleagues while more than 91% got involved in sharing problems with colleagues and exploring solutions with them at a percentage of 73%. Since learning is considered to be a participatory process where knowledge is "constructed" by the participants, then collaborative and exploratory learning in pairs or groups constitute major professional development activities. Learners become involved in a "community of practice" through social interaction and collaboration at greater percentages than "before" the CoP course. In addition, 94% report reflecting on practice "during the CoP" compared with a 34% "before" and 79% putting a new approach into practice. Since we have reports of involvement in reflective strategies, collaborative and cooperative environment, opportunity to stand critically towards the process experienced and practical application of new approaches, it could be suggested here that the online CoP course engages teachers in more meaningful professional development activities than the traditional courses.

Chart 1: Professional development activities used before/ during CoP
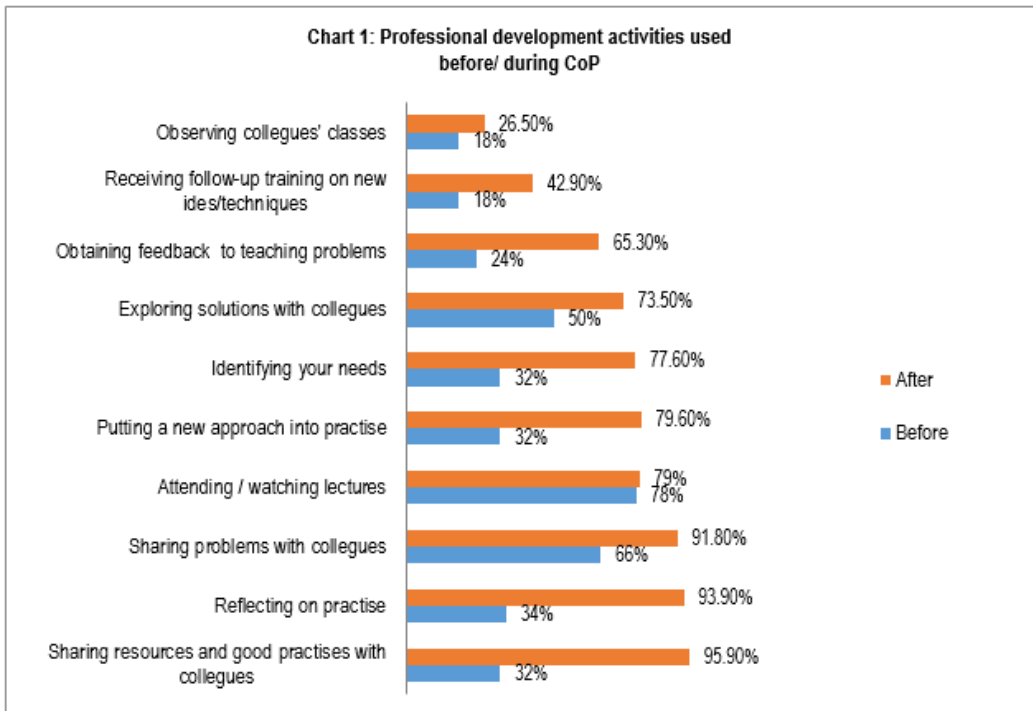
Addressing the second research question,

2) To what extent is there reported reconstruction of beliefs and practices as well as reported effectiveness of their training experience in relation to their teaching practice as a result of this participation?

Chart 2: Expected/Perceived usefulness of their involvement in CoPs for their everyday teaching practice
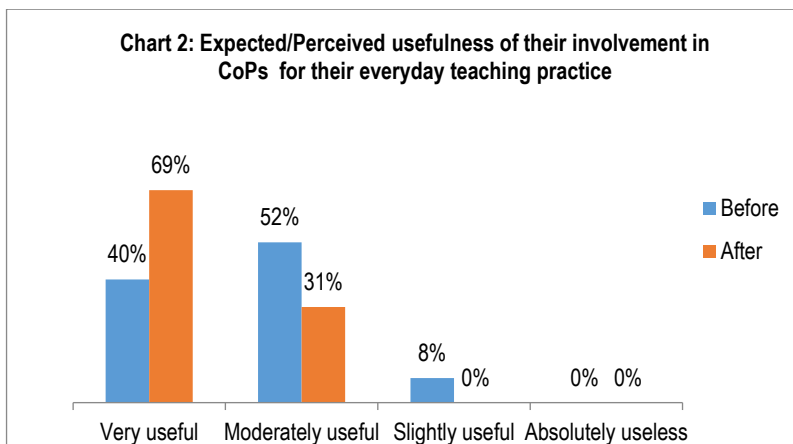
findings show that, in terms of the trainees' perception of the impact and usefulness of the CoP training course for their everday teaching practice, the majority of participants "moved" to the "very useful" category from the "moderately useful"one, having completely changed their minds on the "slightly useful" category (see Chart 2).

Findings also show (see Chart 3) a striking change of satisfaction concerning their teacher development needs. In particular, whereas 8% report a great deal of satisfaction with the traditional courses, 43% take the same stance for the CoP course. In terms of reported effectiveness of their training experience in relation to their teaching practice and perceived benefit, there is a great shift to the "a great deal" category "after" the CoP course (see Chart 4).

Chart 3: Extent to which teacher development needs have been met before/after CoP involvement (regarding everyday teaching practice)

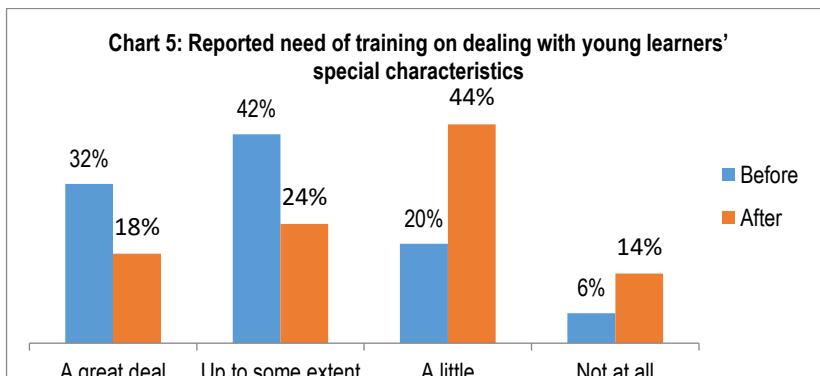**Chart 4: Extent to which topics discussed respond to practical needs**
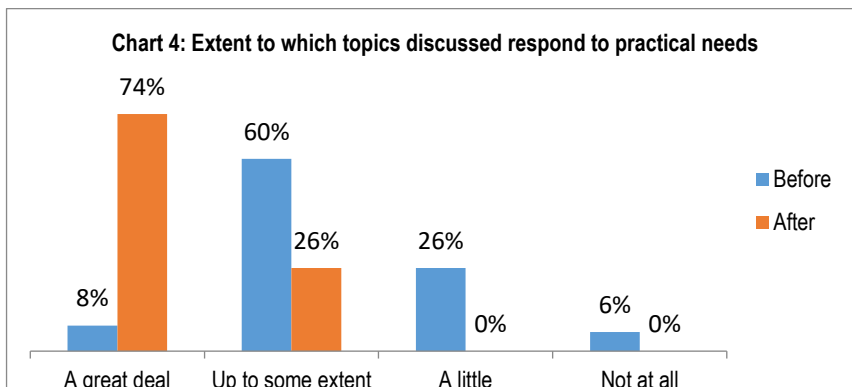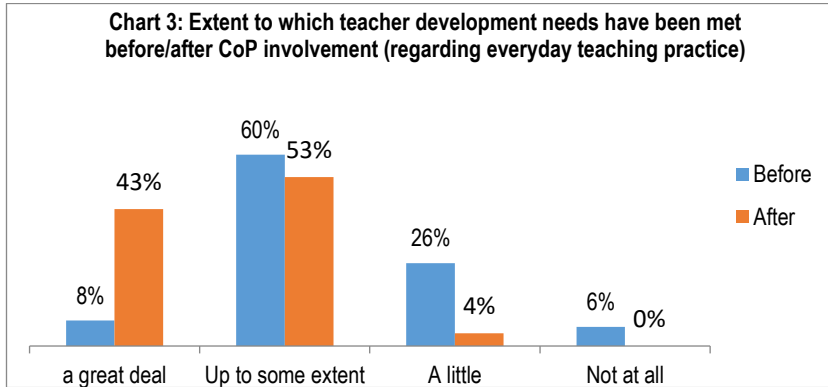
Charts 5 – 11 below describe the reported need of training on issues and useful topics pertaining to the teachers' practical needs for the age group of young learners such as dealing with young learners' special characteristics, using ICT in the classroom, teaching with songs and rhymes, employing arts and crafts, using drama/theatrical activities, storytelling, using games in class and dealing with individual learning difficulties. Results clearly depict an increased perceived benefit as teachers seem more confident and competent to deal with the same topics "after" the CoP training.

Chart 5: Reported need of training on dealing with young learners' special characteristics

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Chart 6: Reported need of training on using ICT

A great deal: Before 26%, After 22%
Up to some extent: Before 42%, After 24%
A little: Before 22%, After 48%
Not at all: Before 10%, After 6%

Legend: Before, After

Chart 7: Reported need of training on teaching with songs and rhymes

A great deal: Before 20%, After 10%
Up to some extent: Before 36%, After 31%
A little: Before 34%, After 43%
Not at all: Before 10%, After 16%

Legend: Before, After

Chart 8: Reported need of training on employing arts and crafts

A great deal: Before 20%, After 14%
Up to some extent: Before 44%, After 37%
A little: Before 22%, After 41%
Not at all: Before 14%, After 8%

Legend: Before, After

Chart 9: Reported need of training on using drama/ theatrical activities

	Before	After
A great deal	30%	16%
Up to some extent	40%	37%
A little	20%	31%
Not at all	10%	16%

Chart 10: Reported need of training on using storytelling

	Before	After
A great deal	24%	17%
Up to some extent	46%	30%
A little	24%	40%
Not at all	6%	13%

Chart 11: Reported need of training on using games in class

	Before	After
A great deal	22%	12%
Up to some extent	38%	29%
A little	32%	43%
Not at all	8%	16%

Chart 12: Reported need of training on dealing with individual learning difficulties

Interestingly enough, topics that constituted monthly CoP modules for discussion such as "Multiple Intelligences and Learning Styles' as well as "Differentiated instruction" could account for the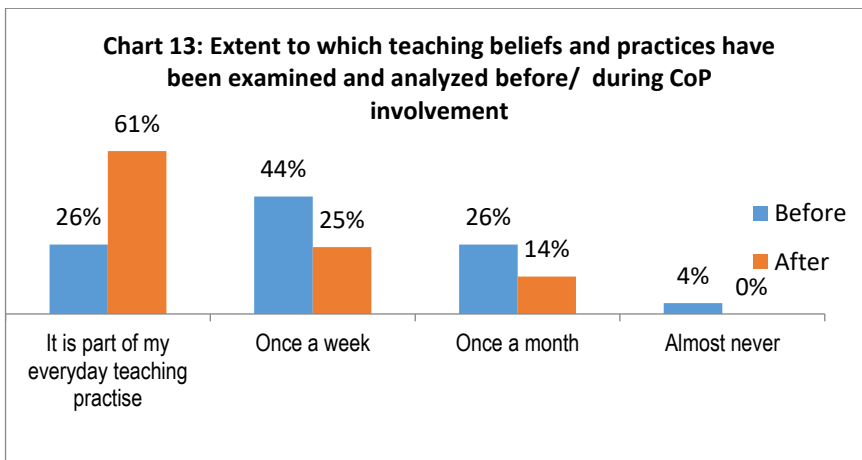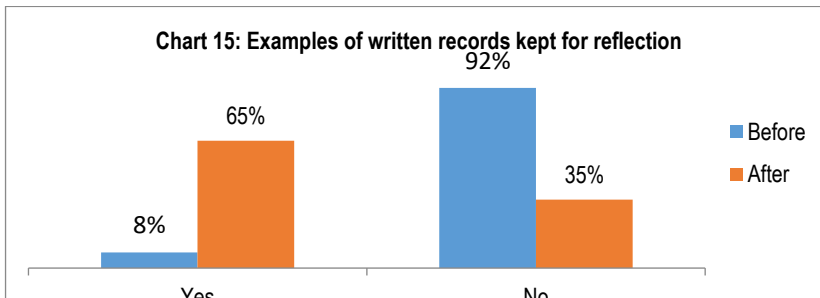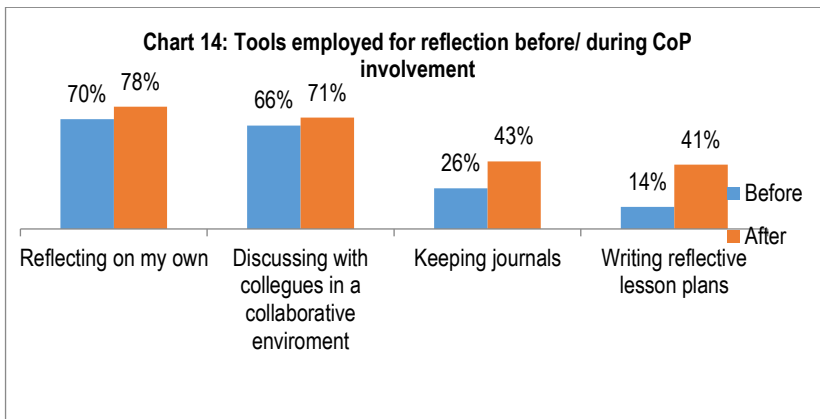 striking reduction of reported difficulty with the topic in question in Chart 12 from 58% "before" to just 12% "after" the CoP course.

The opportunity for reflection because of the role it plays in enhancing teacher change and the trainees' perception of the impact the training course had on their beliefs and everyday practice is the next area of exploration. As Chart 13 shows, there is a significant increase in the number of participants responding that they have integrated examining and analysing their teaching beliefs and practices in their everyday teaching practice amounting to 61% "during" the CoP course.

Chart 13: Extent to which teaching beliefs and practices have been examined and analyzed before/ during CoP involvement

They also report employing more effective reflection practices "during" the CoP, such as keeping journals and writing reflective lesson plans compared with significantly lower percentages "before" (see Chart 14). To corroborate the previous finding, Chart 15 depicts a sharp increase in the percentage of participants responding the provision of examples of written records they kept for reflection purposes.

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Chart 14: Tools employed for reflection before/ during CoP involvement

70% 78%   66% 71%   26% 43%   14% 41%

Reflecting on my own | Discussing with collegues in a collaborative enviroment | Keeping journals | Writing reflective lesson plans

Before
After

Chart 15: Examples of written records kept for reflection

92%
65%
35%
8%

Yes   No

Before
After

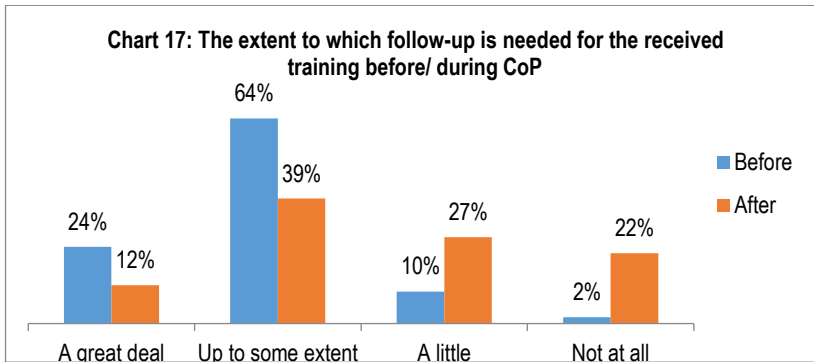Concerning restructuring of knowledge and practices as well as reported effectiveness of their training experience in relation to their teaching practice, there is a significant increase in the percentage of respondents reporting they have integrated new ideas in their everyday teaching practice (see Chart 16) "after" the CoP course.

Chart 16: Frequency of usage of new ideas presented before/ during CoP involvement

18% 29%   38% 40%   38% 27%   6% 2%

In every single lesson | Once a week | Once a month | Once a never

Beofore
After
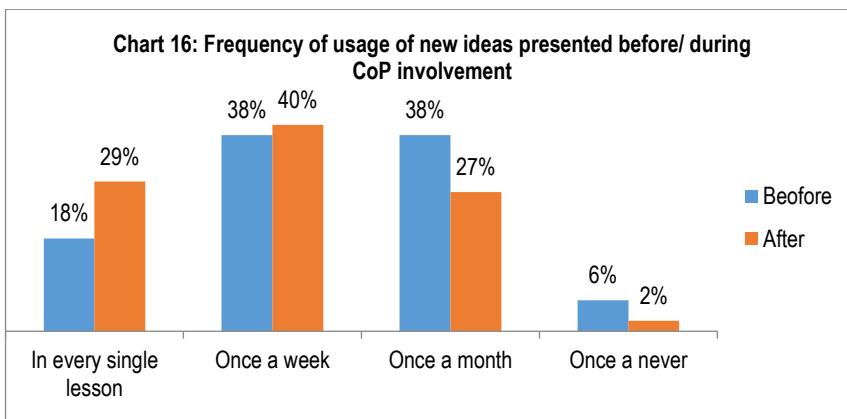
In accordance with the previous finding, fewer teachers responded that they needed more follow-up on the training they received "during" the CoP course than on the training received during traditional seminars (see Chart 17).

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Chart 17: The extent to which follow-up is needed for the received training before/ during CoP

The extent to which new insights into teaching have been gained significantly increases for the "a great deal" category in the "after" sample, with a big decrease in the category of "a little", while the last category remains about the same. The CoP training program emerges as a source of meaningful professional development for this sample (see Chart 18).
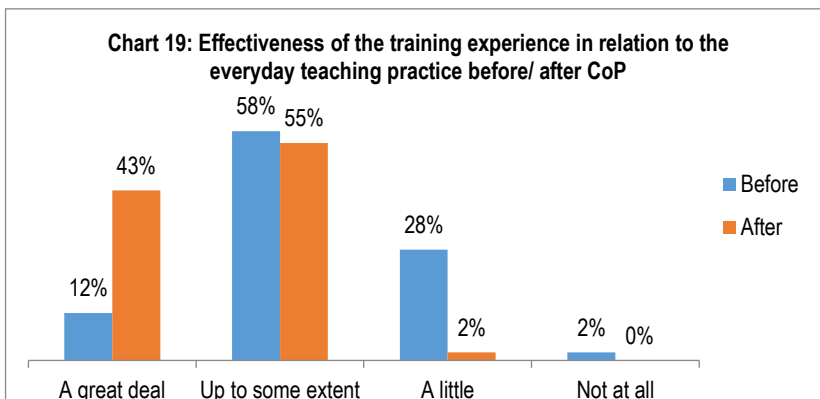
Chart 18: Extent to which new insights into teaching have been gained before/ during CoP involvement
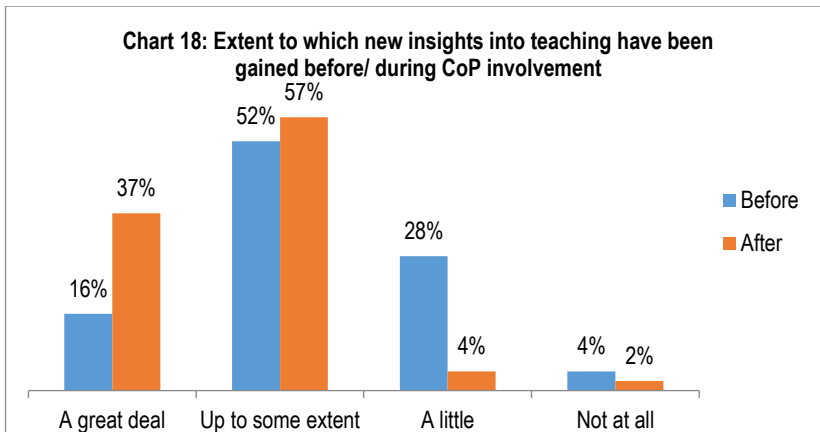
In terms of the trainees' attitude towards the CoP training experience overall, 43% of the participants report finding it very effective in relation to their everyday teaching practice compared with only 12% attributing this kind of effectiveness to the seminars they were involved in "before" (see Chart 19).

Chart 19: Effectiveness of the training experience in relation to the everyday teaching practice before/ after CoP

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3.3 Crosstabulation of variables

The final part of this presentation responds to the existence of statistically significant associations between the teachers' participation in online CoPs and perceived benefit and change of their beliefs and/or practices. It also highlights the specific conditions that have supported their reflection, their reported reconstruction of beliefs and practices and the reported effectiveness of their training experience in relation to their teaching practice. Therefore, the whole analysis and discussion of results below refers to the "after" questionnaire. More specifically, to answer the next research questions,

3) Which factors support perceived benefit and change of their beliefs and/or practices?

and

4) Which are the specific conditions that have supported their reflection, their reported reconstruction of beliefs and practices and the reported effectiveness of their training experience in relation to their teaching practice?

we conducted analysis of data based on a crosstabulation (Chi-Square) test which allows the researcher to conduct tests of independence between the variables of the research instrument, through the significance of the Pearson Chi-square value. In particular, if the p-value of the table is significant at the 0.05 significance level, we can claim that the two variables under statistical analysis are not independent but they are statistically and significantly associated. In this light, the statistically significant index (p-value = 0,044< a=0, 05) of Table 1 below enables us to draw the conclusion that the variables examined in questions 6 and 11.2 are not independent, but they are statistically associated.

Q6 * Q11.2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,040[a]	1	.044		
Continuity Correction[b]	2.085	1	.149		
Likelihood Ratio	3.673	1	.055		
Fisher's Exact Test				.079	.079
Linear-by-Linear Association	3.958	1	.047		
N of Valid Cases	49				

a. 2 cells (50,0%) have expected count less than 5. The minimum expected count is 1,22.
b. Computed only for a 2x2 table

Table 1: Sharing problems with colleagues– Reported usefulness of Involvement

		Table 1: Question 11.2		
		Yes	No	Total
Question 6	Very useful	33(73,3%)	1	34
	Moderately useful	12	3(75,0%)	15
	Slightly useful	0	0	0
	Absolutely useless	0	0	0
	Total	45	4	49

In particular, we have found statistically significant asscociations between the professional development activity of sharing problems with colleagues and reported usefulness of involvement in the ELTeachers CoPs. As table 1 shows, 73. 3% of

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the participants who got involved in sharing problems with colleagues found their participation in the online CoP very useful. The finding is in line with the relevant literature advocating the utilization of collaborative environments to promote the usefulness of the training courses for the teachers' everyday practice.

To corroborate the argument made, we found that the involvement of teachers in sharing resources and good practices with their colleagues in the context of the online CoPs and reported usefulness of their participation in the ELTeachers CoPs for their everyday teaching practice is significally associated at a percentage of 72.3% (see Table 2).

Table 2: Sharing resources and good practices with colleagues – Reported usefulness of Involvement

		Table 2: Question 11.5		
		Yes	No	Total
Question 6	Very useful	34(72,3%)	0	34
	Moderately useful	13	2(100,0%)	15
	Slightly useful	0	0	0
	Absolutely useless	0	0	0
	Total	47	2	49

As far as the perceived effectiveness of professional development activities are concerned, we used the Mann-Whitney U test Wilcoxon Rank Sum Test (see Table 3) to compare means between those who answered that they consider their participation in the ELTeachers CoPs "Very useful" and "Moderately useful" since noone answered that it is not considered useful. We can see that there is a statistically significant difference between means since as table 3 shows, those who answer they found their participation "very useful for their every day teaching practice" they order, on average, the effectiveness of obtaining feedback to teaching problems at a higher rank (4.9) than those who found their participation "moderately useful" (6.3). This fact gives evidence to the importance of the teaching presence (Garrison et al., 2010) in terms receiving feedback from either the trainer or the colleagues themselves as a factor contributing to the usefulness of the training program for the participants and supports the paradigm of a culture of critical colleagueship (Lieberman & Mace, 2009) in the context of online CoPs.

Table 3: Reported usefulness of Involvement – Obtaining feedback to teaching problems as an effective PD activity

		Table 3: Question 12.8 (mean)		
		M.O.=4,9	M.O.=6,3	Total
Question 6	Very useful	34	0	34
	Moderately useful	0	15	15
	Slightly useful	0	0	0
	Absolutely useless	0	0	0
	Total	34	15	49

(Mann-Whitney U Wilcoxon W test)

As for the specific conditions that have supported their reflection and the reported effectiveness of their training experience in relation to their teaching practice, we have found that 85.5% of the participants who kept journals as a tool to guide their reflection on their own and their peers' teaching practice report that they found their participation in the ELTeachers CoP very useful. On the contrary, those who did not keep journals do not evaluate their participation as highly as the former (57.1% see Table 4).

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Table 4: Keeping journals as a tool for reflection – Reported usefulness of Involvement

		Table 4: Question 13.3		
		Yes	No	Total
Question 6	Very useful	18(85,7%)	16(57,1%)	34
	Moderately useful	3	12	15
	Slightly useful	0	0	0
	Absolutely useless	0	0	0
	Total	21	28	49

Similarly, 81.3% of the respondents who can provide examples of their written reflective records also evaluate their participation very useful (see Table 5).

Table 5: Provision of written records for reflection– Reported usefulness of Involvement

		Table 5: Question 13c		
		Yes	No	Total
Question 6	Very useful	26(81,3%)	8(47,0%)	34
	Moderately useful	6	9	15
	Slightly useful	0	0	0
	Absolutely useless	0	0	0
	Total	32	17	49

The significance of reflective practice in the context of the online CoPs as a major professional development activity for this sample is further corroborated with the statistically significant association presented below. Frequent examination and analysis of the teaching practices emerges as a precondition not only for learning but also for the extent to which teachers perceive their participation in the ELTeachers CoPs as a source of meaningful professional development for them (see Table 6).

Table 6: Extent to which teacher development needs have been met– Examination and analysis of teaching beliefs and practices

		Table 6: Question 7				
		A great deal	Up to Some extent	A little	Not at all	Total
Question 13a	It is part of my everyday teaching practice	13(61,9%)	16(61,5%)	1	0	30
	Once a week	8(38,1%)	3(11,5%)	1	0	12
	Once a month	0	7	0	0	7
	Almost never	0	0	0	0	0
	Total	21	26	0	0	49

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In the same light, another factor that enhances the reported effectiveness of their training experience in relation to their teaching practice is the provision of written records for reflection. The role written reflection plays in enhancing the reported impact of the online CoPs bears evidence here (see Table 7).

Table 7: Extent to which teacher development needs have been met – Provision of written records for reflection

		Table 7: Question 13c		
		Yes	No	Total
Question7	A great deal	19(90,5%)	2	21
	Up to Some extent	12(46,2%)	14	26
	A little	1	1	2
	Not at all	0	0	0
	Total	32	17	49

Concerning the specific conditions that have supported their reported reconstruction of beliefs and practices, examination and analysis of their teaching beliefs and practices on a daily basis constitutes a major agent of teacher development and course effectiveness as the findings show (see Table 8). In particular, the vast majority of the respondents who reflected daily on their teaching beliefs and practices were able to integrate the new knowledge received in their every single lesson (46.7%) or once a week (40%).

Table 8: Examination and analysis of teaching beliefs and practices – Frequency of usage of new ideas in class

		Table 8: Question 14				
		In Every Single lesson	Once a week	Once a month	Almost never	Total
Question 13a	It is part of my everyday teaching practice	14(46,7%)	12(40,0%)	4	0	30
	Once a week	0	9(75,0%)	3	0	12
	Once a month	0	0	6(85,7%)	1(14,3%)	7
	Almost never	0	0	0	0	0
	Total	14	21	13	1	49

Similarly, fostering discussions on the theory and practice of teaching can enhance the training course effectiveness as Table 9 shows and corroborates the relevant research findings (Lieberman & Mace, 2009). Frequent examination and analysis of the teachers' beliefs and practices through the forum discussions is considered to be an indispensable factor of the CoP course effectiveness for the 76.1% of the respondents (see Table 9).

Table 9: Reported effectiveness of training experience in relation to teaching practice – Examination and analysis of teaching beliefs and practices

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Table 9: Question 17b						
		A great deal	Up to Some extent	A little	Not at all	Total
Question 13a	It is part of my everyday teaching practice	16(76,1%)	14(51,8%)	0	0	30
	Once a week	4	8	0	0	12
	Once a month	1	5	1	0	7
	Almost never	0	0	0	0	0
	Total	21	27	1	0	49

Finally, the majority of the trainees who report knowledge restructuring tend to be more positive in their attitude and evaluation of the online CoPs. More specifically 77.8% of those who report a great deal of knowledge restructuring also state that their participation in the online CoPs proved very effective for their everyday teaching practice (see Table 10).

Table 10: Gaining of new insights into teaching – Reported effectiveness of training experience in relation to teaching practice

Table 10: Question 17b						
		A great deal	Up to Some extent	A little	Not at all	Total
Question 17a	A great deal	14(77,8%)	4	0	0	18
	Up to Some extent	6	22(78,6%)	0	0	28
	A little	0	1	1	0	2
	Not at all	1	0	0	0	1
	Total	21	27	1	0	49

Conclusion

As Greek and international educational policies require teachers to constantly adapt their pedagogy to new theoretical approaches in order to pursue their professional development and improve their classroom practices, training course designers and decision makers need to provide professional opportunities for teachers that will help them enhance their knowledge and develop new instructional practices (Borko, 2009).The findings confirm the central role that online Communities of Practice can play in the teacher education area in Greece since they prove to be an effective catalyst for the meaningful professional development of teachers and deserve to be further and more widely implemented to become a sustainable one too. However, teaching and teacher training is complex and teacher professional development policies have traditionally been ineffective in inducing lasting change (Cuban, 2013). The present paper provides evidence that teachers can benefit from membership in supportive online Communities of Practice that can help them make sense of new ideas, examine their existing practice and implement new instructional practices.

The study also found that the ELTeachers CoPs engage teachers in more meaningful and effective professional development activities than the traditional methods of in-service teacher education implemented in Greece and constitute an online environment conducive to teacher development. In particular, the online CoP environment facilitates sharing resources, problems and good practices with colleagues as well as the identification of needs, reflective discussion, exploration of solutions with colleagues and obtaining of feedback through the discussion forum. In addition, the ELTeachers CoPs training was found to be very useful for the teachers' everyday practice, addressed more effectively their professional development and practical needs, engaged them in critical reflection and contributed to the reconstruction of their beliefs, knowledge and practices to a great extent. Finally the study designates specific factors associated with their

reflection, their reported reconstruction of beliefs and practices and the reported effectiveness of their training experience in relation to their teaching practice. Examination and analysis of teaching beliefs and practices, keeping journals as a tool for reflection, obtaining feedback to teaching problems and gaining of new insights into teaching are the factors that contribute to furthering our understanding of effective implementation of online CoPs in the context of continuing professional development. Further research on reform initiatives involving online CoPs can shed light on more factors associated with teacher learning, implementation of innovative teaching practices and perceived effectiveness of the training courses and potentially pave the way for a new teacher education paradigm in Greece.

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