Participants' expectations and learning needs in an online professional development initiative concerning Emergency Remote Education during the 2020 COVID-19 lockdown

Aspettative e bisogni di apprendimento dei partecipanti a un'iniziativa online di sviluppo professionale riguardante la Didattica di Emergenza da Remoto durante il lockdown del 2020

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ABSTRACT During the lockdown due to the COVID-19 pandemic, several online initiatives have been enacted to provide teachers and educators with the skills needed to face the transition to online learning and teaching. Voluntary attendance of these kinds of initiatives for continuous professional development can be considered as a self-directed learning strategy enabling users to reduce a perceived skill gap. In this work, we explore and describe the expectations and the perceived learning needs of a group of participants who voluntarily decided to attend a webinar series concerning "Emergency Remote Education", carried out by the European Distance E-learning Network (EDEN). The data collected through a short questionnaire, filled in by 607 participants, show that more than 50% of the respondents self-assessed their level of expertise as high. The results may provide insights into how to design online continuous professional development initiatives which are open to different targets.

KEYWORDS Open Online Learning; Webinars; Self-Directed Learning; Professional Development; Self-Assessment.

SOMMARIO Durante il lockdown dovuto alla pandemia di COVID-19, diverse iniziative online

sono state organizzate al fine di fornire agli insegnanti e agli educatori le competenze necessarie per affrontare la transizione all'insegnamento a distanza. La partecipazione a questo tipo di iniziative, destinate allo sviluppo professionale, può essere considerata come una strategia di apprendimento tramite auto-regolazione (Self-regulation), grazie alla quale gli utenti hanno la possibilità di ridurre un gap di competenze percepito. In questo lavoro, esploriamo e descriviamo le aspettative e i bisogni di apprendimento percepiti da un gruppo di partecipanti volontari alla serie di webinar riguardante la "Didattica di emergenza da remoto", realizzata dall'European Distance E-learning Network (EDEN). I dati raccolti attraverso un breve questionario, compilato da 607 partecipanti, mostrano che più del 50% degli intervistati ha autovalutato il proprio livello di competenza come alto. I risultati forniscono spunti interessanti circa la progettazione di percorsi di sviluppo professionale online aperti a diversi target di fruitori.

PAROLE CHIAVE Apprendimento Online Aperto; Webinars; Auto-Regolazione; Sviluppo Professionale; Autovalutazione.

1. INTRODUCTION

UNESCO[1] reported that 132 countries faced school closures during the COVID-19 pandemic. Indeed, most countries in the world have been enforcing quarantine to control this highly contagious disease.

As a consequence, face-to-face educational functions and activities were being moved online, using remote working sites and tools. In the Covid-19 emergency situation, teachers have been asked to become both designers and tutors, using tools which few have fluently mastered before. As reported by media[2] and recent scientific literature, teachers and educators struggled with the adjustment to working and teaching online (Donitsa-Schmidt, & Ramot, 2020; Rapanta, Botturi, Goodyear, Guàrdia, & Koole, 2020) especially those who had always taught face to face and were being asked to rapidly regroup and prepare for a longer period of educational "social distancing". On the other hand, it has also been reported that the pandemic created opportunities for teachers to be *changemakers* in the transition of a traditional face to face teaching and on-school site supervision to remote teaching (Quezada, Talbot, & Quezada-Parker, 2020). Teachers and educators' difficult shift to online learning would have been predictable, to some extent. Looking, for example, at the most recent OECD results from "The Teaching and Learning International Survey (TALIS)", different issues can be detected concerning the teachers' use of digital technologies in the classroom. Firstly, the lowest area in terms of "teachers' self-efficacy" concerns the perception of being able to support students' learning through the use of ICT. A low percentage of teachers declared to use effective pedagogical practices related to the use of ICT, such as project-based learning. Less than 60% of teachers were trained during their formal education in the "Use of ICT for teaching" and less than 45% felt "well" or "very well prepared" for the "Use of ICT". Having said that, less than 20% of teachers reported a high level of need for professional development in the ICT skills for teaching (OECD, 2019). The forced transition to online learning experienced from the beginning of 2020 has been probably affecting the teachers' perception of their needs for professional development in the field of educational technologies. In response to these newly perceived learning needs, several initiatives have been organized to provide teachers tools to properly face the transition to online learning and teaching. Besides professional training organized by

[1] https://en.unesco.org/sites/default/files/gem2020-extraordinary-session-background-document-en.pdf

[2] https://www.nytimes.com/2020/04/16/opinion/coronavirus-schools-closed.html

the schools for their staff, many institutions (e.g. Amazon AWS Educate[3], National Geographic Learning[4]) have been providing informal learning opportunities, mainly through free webinars, for teachers interested in developing their ICT skills for teaching.

The several learning opportunities available for free online and the rapid changing in professional practices have been requiring teachers to be able to self-direct their continuous professional development (Louws, Meirink, van Veen, & van Driel, 2017). Self-directed learning is as a process in which individuals take the initiative in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Knowles, 1975). Self-directed learning has an impact on the quality of the participation in continuous professional development, which includes not only in-service education and training in the form of organized programs but also every self-determined and systematic development such as the independent reading of books and journals, attending university courses, programs and conferences, as well as interaction with colleagues and principals (Wermke, 2011). In this work, we will explore and describe the expectations and the perceived learning needs of a group of participants who voluntarily decided to attend an online professional development initiative concerning "Emergency Remote Education - ERE" during the 2020 lockdown. According to Knowles' definition, in this study we consider the voluntary participation to the online professional development initiative as a self-directed learning strategy in which participants' try to acquire knowledge and skills on ERE related topics.

2. THE RELATION BETWEEN TEACHERS' SELF-DIRECTED LEARNING, MOTIVATIONS AND PERCEIVED LEARNING NEEDS

In the context of professional training, teachers self-direct their learning about teaching through "*on-going reflection on practice and underlying assumptions […] identifying instructional principles associated with best practices, planning activities consistent with principles, enacting their plans in practice, monitoring outcomes, and critically reflecting on their efforts*" (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004, p. 439). Self-directed learning has been considered a broader construct encompassing self-regulated learning as narrower and more specific one (Saks, & Leijen, 2014). Self-regulated learning involves the adoption of *self-regulated learning strategies*, which are actions and processes directed to the acquisition of information or skills (Zimmermann, 1990). A second important aspect is related with *motivational processes*, in other words the reasons why people decide to devote their effort to learn a specific subject or skill. Different phases characterized a self-directed learning processes (Knowles, Holton, & Swanson, 2015):

- Learning needs self-assessment;
- Planning learning;
- Engaging in learning;
- Self-evaluate learning.

A learning need can be described as a gap between the desired competencies and the learners' current level of ability (Knowles etbal., 2015). Learning needs could also derive from professional growth, which means "*an inevitable and continuous process of learning*" (Clarke & Hollingsworth, 2002, p. 947). When teachers assess their own learning needs, they can be motivated to define new learning goals and strategies to achieve them. Previous research has investigated the motivations which bring teachers to voluntarily

[3] https://aws.amazon.com/it/education/awseducate/

[4] https://eltngl.com/assets/html/digital-resources/

participate in continuous professional development programs (Van Eekelen, Vermunt, & Boshuizen, 2006; Louw et al., 2017). Moreover, teachers can be more willing to learn 1) by experimenting, 2) by reflecting on their own teaching practice 3) from others 4) by doing or 5) by keeping up to date (Meirink, Meijer, & Verloop, 2007). In this research, we assume that the perception of teachers and educators learning needs has been affected by the rapid and forced shift to online teaching. As a consequence, teachers and educators may have been adopting self-directed strategies to learn what they needed to teach remotely in emergency time. The attendance of online initiatives, such as webinars, for continuous professional development is one of the possible self-directed learning strategies for teachers.

In this research, we will describe the expectations and the perceived learning needs of a group of teachers and educators who participated in a webinar series called "Education in Time of a Pandemic" carried out by the European Distance and E-learning Network (EDEN)[5].

3. THE CONTEXT OF THE RESEARCH: THE EDEN WEBINAR SERIES

The European Distance and E-Learning Network is an international educational association and not-for-profit organisation aimed at sharing knowledge and improving understanding amongst professionals in distance and e-learning and to promote policy and practice across the whole of Europe and beyond. In response to the school closures and the rapid mobilization to online teaching, EDEN rolled out a series of practical webinars on how to take face-to-face education online. The webinars took place on a weekly basis for three months. In total, eleven webinars were carried out from the 30th of March 2020 to 8th of June 2020. Each webinar consisted of a brief presentation addressing the webinar topic complemented by a question-and-answer session, where participants were encouraged to share their opinion and experiences, and ask for their most pressing questions. The webinars covered different kinds of topics (Table 1). Some webinars were more focused on e-learning teaching/assessment methodologies (webinars number 1 and 4) and others considered broader institutional aspects, such as quality assurance and accountability (e.g. webinars 2 and 10). The invited speakers were expert researchers and practitioners in the field of distance, online teaching and ERE. For each webinar, some literature references related with the speakers' expertise is reported in Table 1.

5 https://www.eden-online.org/covid-webinar-series/

WEBINAR NUMBER, NAME AND INVITED SPEAKERS	KINDS OF TOPIC	REFERENCES	NUMBER OF PARTICIPANTS
W1) "How to start teaching online". Bates, T.	General on distance learning/ e-learning	Bates, 2011; Bates, 2005	700
W2) "When education moves home". Ossiannilsson, E.	Policy-making	Ossiannilsson & Landgren, 2012	369
W3) An EDEN response to your most pressing questions. Olcott, D, Jr., Poce, A., Blaschke, L. M.	General on distance learning/ e-learning	Poce, Amenduni, De Medio, Valente, & Re, 2019; Olcott, 2012,	180
W4) How to design and manage assessment for online learning. Soiero, A., Brown, M., Farrell, O.	Assessment	Farrell & Seery, 2019; Soeiro & Falcão, 2013; Brown, Costello, Donlon, & Giolla-Mhichil, 2015	581
W5) How to engage and support students online.	Instructional design	Tait, 2000	337
W6) F2F at a distance – building a learning community online. Wheeler, S.	General on distance learning/ e-learning	Wheeler & Wheeler, 2009	296
W7) How to manage the onslaught of information and fake news. Katz, I. Amenduni F.	21st century skills	Katz, 2007; Poce, Amenduni, De Medio & Re, 2019	170
W8) Practical Tips for Learning and Instructional Design. Salmon, G. Evans, G. Seitzinger, J.	Instructional design	Salmon, 2013	317
W9) Use of OER & OEP in the Online Pivot. Weller M., Cronin C.	Open education	Weller, 2014	211
W10) How do we plan for education after the pandemic? Softić S. K, Teixeira A., Fassina, N., Makoe M.	Policy Making	Teixeira & Mota, 2014; Softic, & Bekic, 2008	181
W11) Developing 21st Century Skills Through Teaching Online: Opportunities and Challenges Edirisingha, P. Ehlers U.	21st century skills	Edirisingha, Nie, Pluciennik, & Young, 2009; Ehlers, 2004	210

Table 1. Topics addressed in the "Education in Time of a Pandemic" webinar series.

Although webinars were devoted to school teachers, university teachers, educators and e-learning experts, they were accessible to anyone. Webinars registrations are still available on the YouTube EDEN channel. Participants took part in the webinars and in our data collection on a voluntary base.

The initiative received a huge response in terms of participation and countries represented, as reported by the promoters of the initiative during the EDEN 2020 Conference (Read, Poce & Blaschke, 2020).
This research was moved by the interest to understand which motivations and learning needs bring participants to attend continuous professional learning in ERE during a time of the lockdown. Thus, in this work we will try to answer the following research question:
"*Which expectations and learning needs have people regarding their learning in a continuous professional development initiative concerning ERE?*"

4. DATA COLLECTION AND DATA ANALYSIS

At the end of each webinar, a short questionnaire[6] was submitted to analyse the participants' learning needs and expectations toward the continuous professional development initiative.
Data were collected anonymously and participants decided to fill in the questionnaire on a voluntary basis. The questionnaire is composed by 7 closed questions and 1 last open-ended question. The first five closed-questions are aimed at acquiring a few participants' personal information: gender, age, occupation, geographic area, and field of expertise. The sixth question requires to self-assess their e-learning proficiency and the seventh closed-question asks participants what they expected from the webinar. Participants were allowed to express more than one preference and they had to choose among five options. Options 1 and 2 are more connected with an expectation to learn through "acquisition", whilst options 3 and 4 are more related with the expectation to learn through "participation" (Sfard, 1998). Option number 5 includes both the acquisition and the participation dimensions of learning. If participants were not represented by the five expectations, they could choose an "other" option where to indicate further expectations.

1) Acquiring e-learning practical tools and best practices (ACQ).
2) Being updated regarding e-learning new trends (UPD).
3) Sharing ideas to face the challenges related with COVID-19 (SHR).
4) Meeting and discussing with people interested in the e-learning field (MEET).
5) Having the opportunity to ask questions to the expert (EXP).

Finally, the last open-ended question investigates participants learning needs. It was decided to have an open-ended question at the end because this study is explorative in nature. Teachers and educators are facing an unprecedented challenge and we did not want to use previous categories for describing new issues. Categories emerged through the open-ended questions can be used to create and validate closed measures in the future. Different kinds of analysis have been applied to the data. Descriptive statistics were used to describe the group of participants to the continuous professional development initiative proposed by EDEN. The strength of the association between the five expectations and between participants' occupation was calculated through Phi, Cramer's' V and Chi square. Answers to the last open-ended question were analysed through the support of an automatic tool for text analysis named Monkeylearn©. More specifically, the function "keyword extractor" was adopted. Keyword extraction is a text analysis technique that consists of automatically extracting the most important words and expressions in a text. The application calculates the TF-IDF (term frequency–inverse document frequency) to measure the relevance of each keyword in the answers (Ramos, 2003). Each participant's open-answers were classified into one or more concepts/keywords. The strength of the associations between learning needs extracted from the last open-ended answers and participants' features was also calculated through Phi, Cramer's' V and Chi square.

[6] The questionnaire is available at the following link https://forms.gle/VsNKD1K4kJg58AbK6

5. RESULTS

5.1. *Results of quantitative analyses*

We collected a total of 607 responses. Table 2 shows the distribution of questionnaire responses throughout 10 webinars[7]. On average, for each webinar 20.1% of participants' answers to our questionnaire were collected, with the highest average of responses for webinar n. 5 (30%) and the lowest for webinar n. 1 (6.5%). Participants' gender and average age are also presented in table 2.

WEBINAR NUMBER	NUMBER OF RESPONSES	GENDER	AVERAGE AGE
1	45 (6.5%)	F = 36; M = 9;	46,8 (SD = 11,2)
3	52 (29%)	F = 36; M = 16	48,1 (SD = 9,7)
4	145 (25%)	F = 99; M = 45	47,3 (SD = 9,8)
5	100 (30%)	F = 71; M = 27	49,5 (SD = 11,9)
6	93 (31%)	F = 69; M = 23	47,9 (SD = 10,5)
7	17 (10%)	F = 11; M = 6	46,3 (SD = 11,01)
8	43 (14%)	F = 29; M = 14	50,5 (SD = 10,3)
9	41 (19.4%)	F = 28; M = 12	47,85 (SD = 10,6)
10	35 (19%)	F = 21; M = 14	47,1 (SD = 9,8)
11	36 (17.1)	F = 24 M= 12	49,6 (SD = 10,1)
TOTAL	607 (20.1)		

Table 2. Response rate for the 10 webinars.

Table 3 shows the association between the webinar attended and participants' level of self-assessed e-learning expertise. 6 out of 10 webinars (webinar number 3, 6, 7, 9, 10, 11) show that more than 50% of the respondents self-assessed their level of expertise as *high.* Two webinars were evaluated mainly by people who self-assessed their level of expertise as *average* (webinar 8 = 44,2%; webinar 1 = 35,6%). The introductory and general webinar n.1 had the highest percentage of participants who self-assessed their eLearning expertise as *low* is (33,3%).

7 Because of a technical problem with the survey, it was not possible to collect responses from the webinar n. 2

NUMBER OF THE WEBINAR	LEVEL OF SELF-ASSESSED ELEARNING EXPERTISE		
	LOW	AVERAGE	HIGH
1 - GENERAL	33,3%	35,6%	31,1%
3 - GENERAL	23,1%	23,1%	53,8%
4 - ASSESSMENT	21,4%	31,0%	47,6%
5 - INSTRUCTIONAL DESIGN	12,0%	41,0%	47,0%
6 - GENERAL	11,8%	32,3%	55,9%
7 - 21ST CENTURY SKILLS		23,5%	76,5%
8 - INSTRUCTIONAL DESIGN	16,3%	44,2%	39,5%
9 – OPEN EDUCATION	7,3%	31,7%	61,0%
10 – POLICY MAKING	11,4%	31,4%	57,1%
11 – 21ST CENTURY	11,1%	33,3%	55,6%

Table 3. association between the webinar attended and the participants' level of self-assessed e-learning expertise.

Figure 1 shows the association between the webinar topic and the role of the respondents. Webinars on *General topics* (1, 3, 6) are more associated with responses by *Senior Researcher and University Professor*. On the other hand, most of the hands-on webinars were more associated with participants with *E-learning expert, trainer and educator* roles.

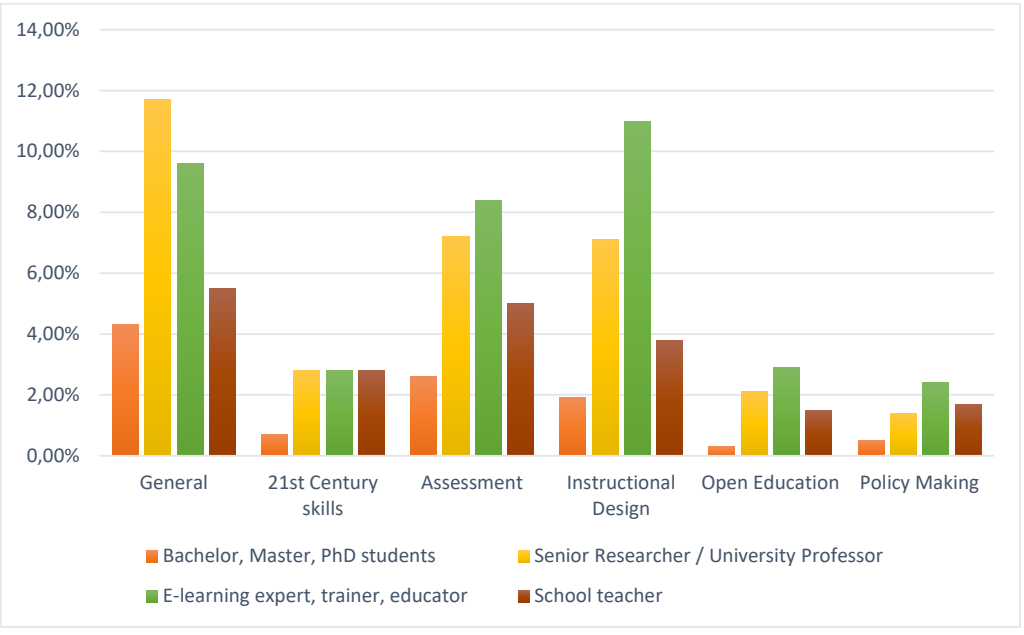

Figure 1. association between the webinar topic and the role of the respondents.

Figure 2 presents which were the most reported expectations by participants for each webinar. In 8 out of 10 webinars, the two most reported expectations were "*Acquiring e-learning practical tools and best practices*" followed by "*Being updated regarding e-learning new trends"*. Only in the webinar n. 7 those two expectations are inverted, whilst in webinar n. 11 the two most reported expectations are "*Being updated regarding e-learning new trends*" followed by "*Sharing ideas to face the challenges related with COVID-19*".

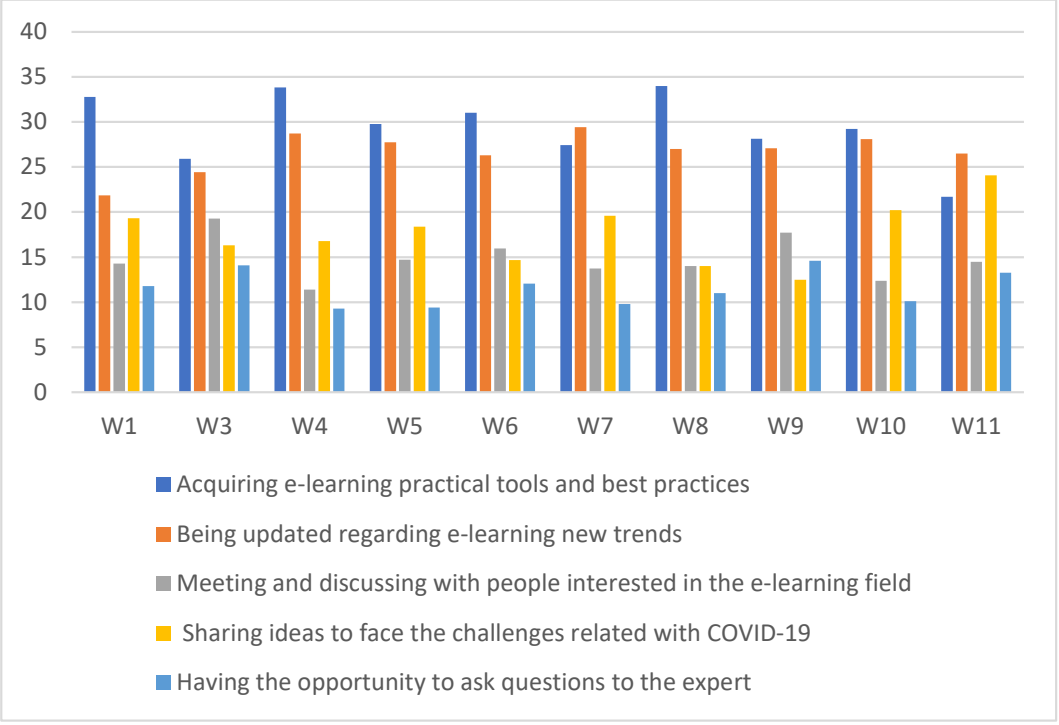

Figure 2. Expectations reported by participants for each webinar.

We inquired if there are any associations among the five expectations investigated by the questionnaire and selected by the participants (Table 4).

		ACQ	UPD	MEET	SHR	EXP
ACQ	**PHI**	1	0,084*	-0,022	-0,097*	0,139**
	SIGN		0,039	0,594	0,017	0,01
UPD	**PHI**		1	0,085*	-0,042	0,129**
	SIGN			0,037	0,301	0,01
MEET	**PHI**			1	0,175**	0,252**
	SIGN				0,000	0,000
SHR	**PHI**				1	0,157**
	SIGN					0,000

Table 4. Associations among the five expectations indicated by the participants.

5.2. *Results of qualitative analyses*

The strongest association identified is between "EXP - Having the opportunity to ask questions to the expert" and "MEET - Meeting and discussing with people interested in the e-learning field" (phi = 0,252).[8] The second strongest association identified is between "MEET - Meeting and discussing with people interested in the e-learning field" and "SHR - Sharing ideas to face the challenges related with COVID-19" (phi = 0.175). Those three expectations are related with an idea of learning based on *participation and dialogical exchanges* (Sfard, 1998) in a community of peers or with more expert colleagues.

We received 148 answers to the last open-ended question in which participants were required to indicate their learning needs. From the analysis of the last open-ended answers, nine topics have emerged, as shown in the Figure 4 (see the Appendix for a more detailed explanation of the topics).

"Students" is the most reported topic (N = 44). Participants reported questions regarding how to deal with students and how to improve the quality of the relationship between them and their students, as in the following extract (E1).

Extract 1: *"I need to learn how to communicate with my students through live conferences in a more productive way. I have no problems with video lectures, e-mail communication, chats, but I feel, when I talk with them live online in a form of a conference... We never develop a constructive kind of discussion. I am the only one who talks, they just agree with everything, have smaller questions regarding technical issues I answer right away and that's basically it."* (Senior Researcher, Associate or Full professor, 35 years, Female).

Other two frequently reported topics are "Learning" (37) and "Assessment of Students" (36). Participants reported questions regarding how students' learning processes change in online teaching. Moreover, they also reflect regarding their own learning in relation with students' learning, as shown in the following extract (E2).

Extract 2: "*What should have been a gradual process has become revolutionary because of the challenges imposed by COVID 19 and we find ourselves in a situation in which both the educators and students are learning at the same time*." (Educator or Trainer, 60 years, Male).

Assessment seems to be one of the most pressing issues for participants. Although they appreciate the proposals made during the webinars, such as the use of e-portfolio and rubrics, they asked for solutions concerning traditional summative assessment and testing, as shown in the following extract (E3).

Extract 3: "*I need some "right now tools" to deal with traditional testing. I also promote e-portfolios and*

[8] We reported Phi because it provides information regarding directionality. The value of Phi is the same of the values of Cramer's' V.

authentic assessments, but my projects right now need secure testing environments online." (E-learning expert, 58 years, Male).

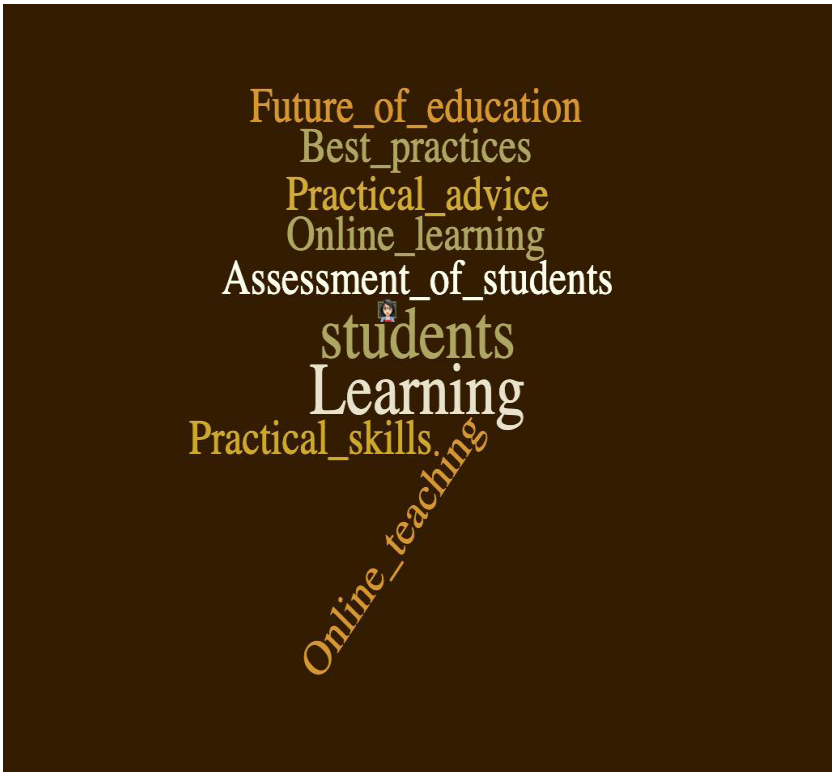

Figure 3. Topics related with webinars' participants learning needs.

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5.3. *Data association*

We investigated the association between learning needs reported by the participants and the webinar attended (Figure 5). Only for participants who reported "assessment" as a learning need, there is a significant association with the webinar attended Chi-square (9) = 25,547148. Sign. = .002. V = .452. As expected, the majority of people who mentioned "assessment" in their learning needs (N = 16), attended webinar n. 4, which was specifically targeted on assessment as a topic. Regarding the other learning needs, participants were similarly distributed across the other webinars.

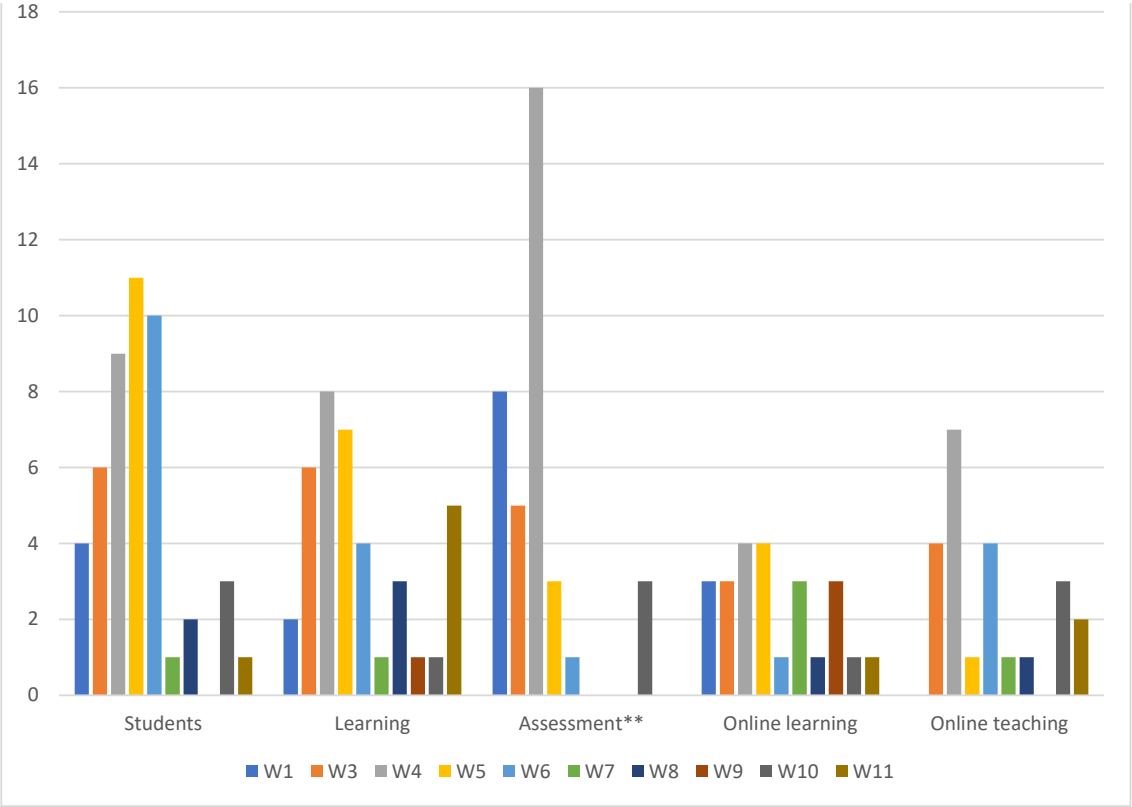

Figure 4. association between learning needs reported by the participants and the webinar followed.

We finally investigated the presence of an association between participants' professional role and the learning needs indicated in the last question (Figure 6). Figure 6 shows the presence of some differences among groups. The interest to learn more about "Students" is reported by *e-learning experts in the academia* (41,7%) followed by the group of *Senior Researcher, Associate or Full professor* (39%). This topic is rarely mentioned by non academic e-learning expert, PhD or Young Researcher and Education Leader/Manager.
On the other hand, the need to learn more about "Online learning" is reported as a learning need by *e-learning experts outside the academia* (60%), followed by *PhD or Young Researcher* (37,50%) and *Education Leader / Manager* (33,30%) and poorly by *e-learning experts in the academia* and *Senior Researcher, Associate or Full professor.*
It is interesting to see a different trend between the interest for "Online Learning" and "Learning" more in general. The latter is not reported at all by *e-learning experts outside the academia* and *PhD or Young Researcher,* which, as previously described, expressed the need to learn more about the former. "Learning" is the learning need most reported by *Educators and Trainers* (44,7%) followed by *E-learning experts in the academia* (33,30%) and *School Teachers* (28,6).

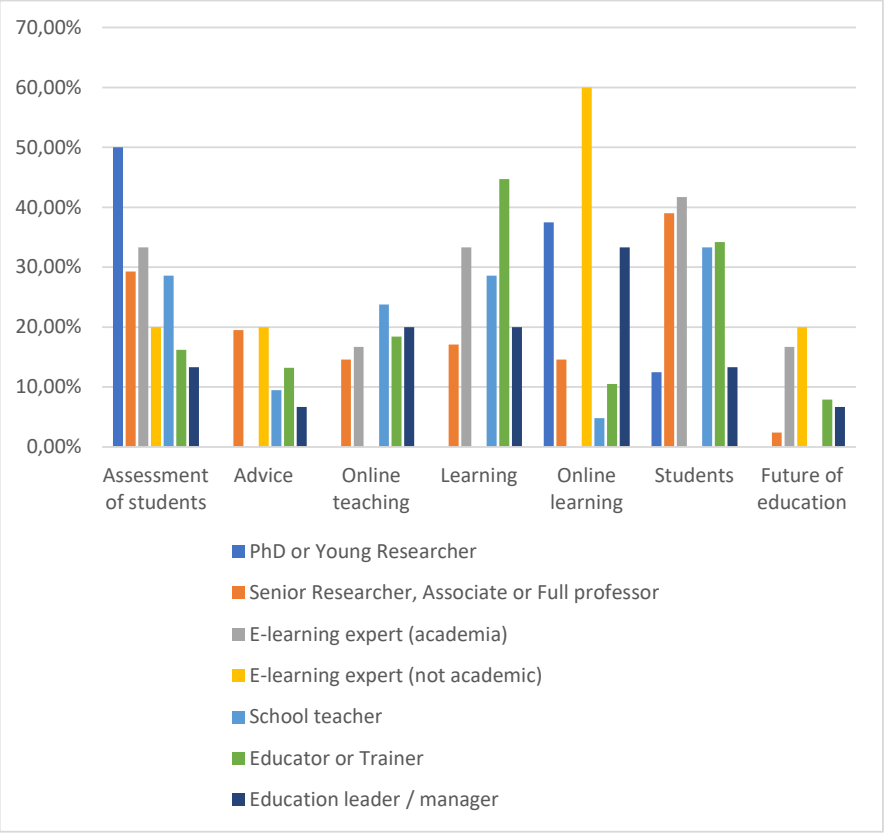

Figure 5. Association between participants' professional role and their learning needs.

6. DISCUSSION AND CONCLUSIVE REMARKS

The forced transition to online learning experienced by teachers and educators worldwide from the beginning of 2020 has been probably affecting the perception of their needs for professional development. It is reasonable to think that many teachers have perceived a skill gap during the last months, realising not to be properly prepared to face the emergency of remote education.

In response to newly perceived learning needs in the field of educational technologies, several initiatives have been organized to provide tools to properly face the transition to online learning and teaching. The growing number of free online learning opportunities and the rapid change in professional practices due to the school lockdown have been requiring teachers and educators to be able to self-direct their continuous professional development (Louws, et al., 2017). According to the self-directed learning model, people can be motivated to plan and look for learning initiatives, when they perceive the need to develop their skills (Knowles, Holton, & Swanson, 2015). In the present study, we have investigated the expectations and the perceived learning needs which moved a group of participants to attend an online continuous professional development initiative concerning "Emergency Remote Education" during the 2020 lockdown.

The initiatives organized by EDEN "Education in the time of a Pandemic" was attended by more than 3000 participants from all over the world. Among these, a group of participants voluntarily decided to provide some information regarding their expectations and perceived learning needs.

For most of the webinars, participants assess their level of expertise as high. We can assume that, in general, the initiative was more attractive for people who have some confidence in their ability to deal with e-learn-

ing related topics. These results are in line with literature which have highlighted how behavioral intention to use technology, or to follow a web-based training initiative, is affected by the perception to be able to use digital technologies (Cheng, Wang, Yang, & Peng, 2011; Kelly, 2014)

In most of the webinars, the most reported expectations expressed by participants concern the acquisition of new knowledge (practical tools, best practices and new trends). Expectations related with learning as participation were less commonly expressed. However, we found an association among the three expectations related to participative forms of learning:

1) having the opportunity to ask questions to the expert,
2) meeting and discussing with people interested in the e-learning field" and
3) sharing ideas to face the challenges related with COVID-19".

From the analysis of the open-ended answers, nine topics related to participants' learning needs have emerged:

1) relation and interaction with students;
2) how learning processes changed across physical and virtual environment;
3) tools and methods for students' assessment of students;
4) tools and methods for Online Teaching;
5) and Online Learning;
6) general practical advice to face the emergency;
7) best practices, included evidence based or practices experienced in other contexts;
8) future of Education (lessons learned, what to bring in the "new normal";
9) practical skills related to specific software and technologies;
10) We saw that some occupations are more associated with specific learning needs.

We also investigated if the expression of specific learning need was more or less associated to each of the 10 webinars. Only for participants who reported "assessment" as a learning need, a significant association was found with webinar n. 4, which was specifically targeted on assessment as a topic. According to the Self-regulated learning theory (Knowles et al., 2015), people who perceived a learning need (in this case, concerning the topic of the assessment) define consistent learning strategies to reduce a skill gap. This result confirms that the voluntary participation to online initiatives like the EDEN webinar series can be interpreted in the light of self-directed learning theories.

Regarding the other learning needs, wider in nature, participants were similarly distributed across the webinars and no specific match between learning needs and webinar was identified.

We found that participants who work in school or within higher education were more interested in understanding how to deal with "Students" and in "Learning" in more general terms. On the other hand, people who work outside formal educational institutions seem to be more interested in technical aspects of "Online Learning".

Although this research is exploratory in nature, it starts to investigate expectations and learning needs of users who decided voluntarily to attend an online continuous professional development initiative concerning "Emergency Remote Education", during the first period of school lockdown caused by the pandemic. The ability to actively look for learning opportunities in order to reduce a perceived skill gap is much required in knowledge workers (Knowles, 1975), included those who are directly employed in the educational field (Louws, et al., 2017).

Among the study limitations, we should mention that the fact that some respondents could be the same for different webinars, might have introduced a bias in the results. However, as the questions were focused on the respondents expectations and needs concerning the specific webinar the respondent had just attended,

we are confident that this bias could be minimal.
More research in future would be necessary to understand how teachers and educators decide whether or not to attend online continuous professional development initiative, how they look for and select which initiatives to attend and which personal characteristics promote self-driven learning behaviors.
We found, for example, that the EDEN webinar series was attended mainly by people who self-assess their e-learning skills as medium or high. In future research, it would be interesting to investigate whether teacher self-efficacy related with the use of technology affect their intentions to attend online continuous professional development initiatives. Eventually, we think that our results can provide insights regarding how to design online continuous professional development initiatives which are open to different targets.

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APPENDIX

TOPICS	OCCURRENCE	EXAMPLES OF PARTICIPANTS' ANSWERS
Future of education	9	I would very much benefit from discussing the road map we need to draw and implement in order to be able to conserve the right things that are now evolving, and have them as basis for future steps
Practical advice	19	New ideas and technological solutions how to hold fieldwork classes or at least some sort of substitution for fieldwork online.
Online learning	22	How do we equip the learners with skills of writing Mathematics documents online
Students	44	I need to learn how to communicate with my students through live conferences in a more productive way. I have no problems with video lectures, e-mail communication, chats, but I feel, when I talk with them live online in a form of a conference... We never develop a constructive kind of discussion. I am the only one who talks, they just agree with everything, have smaller questions regarding technical issues I answer right away and that's basically it.
Best practices	11	Current approaches/practices for online activities for learning
Assessment of students	36	I need some "right now tools" to deal with traditional testing. I also promote e-portfolios and authentic assessments, but my projects right now need secure testing environments online.
Practical skills	7	Learning to use more digital tools like google sites for promoting students' online learning community
Online teaching	23	What is the teacher in his/her online activities: entertainer or interviewer?
Learning	37	What should have been a gradual process has become revolutionary because of the challenges imposed by COVID 19 and we find ourselves in a situation in which both the educators and students are learning at the same time.