



Lifelong education at the time of COVID-19 pandemic: an analysis of participants' perception

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Abstract

IZS-Teramo (www.izs.it) is a public health institution of the Italian National Health System. It offers high added-value services in the areas of animal health and welfare, veterinary public health and environmental protection, adopting a One Health approach. Since 1990, the Institute has planned and delivered residential and e-learning courses thanks to the presence of a dedicated training unit, whose learning services are compliant with the UNI EN ISO 9001:2015 Standard. The knowledge management system built along the years, responds to the learning needs expressed at national and international level by competent authorities and other relevant stakeholders. COVID-19 accelerated the digital transformation, already in progress, in the Italian public administrations. The physical distancing imposed by the pandemic forced the Institute to introduce a complete re-organisation of the working asset. In that scenario, residential events have been transformed into synchronous and asynchronous at distance courses. The use of web based technologies became the essential way to spread and share scientific know-how to the main group of our primary beneficiaries (veterinarians, biologists, lab technicians, chemicals, pharmacists, medical doctors and others). All the synchronous activities were supported by the Cisco Webex platform. From June 2020 to August 2021, 83 on-line courses were delivered, reaching out almost 9,000 participants. An on-line survey was launched to a selected target group of courses' attendees held during the last 18 months, to assess their satisfaction and better plan the future educational proposals. Through the SurveyMonkey® platform, a multiple-choice questionnaire was delivered to almost 3,000 participants of our national on-line initiatives. A total of approximately 20% of the sample (574 out of 3,000) has successfully completed the survey. The analysis of the results is useful to better address the future educational offer of the Institute, and better calibrate the various technical solutions for distance learning.

Keywords: Lifelong education, distance learning, COVID-19 pandemic, web based training methodologies, survey.

1. Introduction

This article presents the lifelong learning experience carried out by the Training and Project Management Unit of IZS-Teramo - (www.izs.it) during the COVID-19 pandemic. Since nineties', the Unit has planned and delivered residential and e-learning courses (mainly asynchronous) in compliance with the UNI EN ISO 9001:2015 Standard. The knowledge management system built along the years, responds to the learning needs expressed at national and international level by relevant competent authorities and other stakeholders. COVID-19 accelerated the digital transformation, already in progress, in the whole Italian public administrations [2]. The physical distancing imposed by the pandemic, forced the IZS-Teramo to introduce a complete re-organisation of the working asset, replacing the traditional residential training with on-line synchronous courses. Therefore, during COVID-19 pandemic, distance learning represented the only opportunity for adults to gain training experiences, respecting the imposed physical distance rules and responding to the constant need of life-long learning. On-line learning systems are web-based solutions able to plan and manage courses on Internet, using those technologies to facilitate a virtual two-way communication between attendees and experts/tutors [4]. The CISCO® Webex System has been internally selected as the most appropriate technological platform for on-line meetings, videoconferences, webinars to satisfy the new emerged needs. Infact CISCO® offers engaging three tools, namely "Meetings", "Events" and "Training", to host customised, interactive, scalable and large-scale training events. This option represented the privileged way to reach our main group of beneficiaries (veterinarians, biologists, lab technicians, chemicals, pharmacists, medical doctors and others) across Italy, providing them several training events.



From 6 December 2021 to 15 January, 2022, a specific on-line survey was launched to investigate the level of appreciation and the effectiveness of the distance learning methodologies adopted by IZS-Teramo during the last two years, with the aim to plan a possible routine use of distance learning approaches also for the future, after the end of the SARS-CoV-2 emergency.

2. Methodology

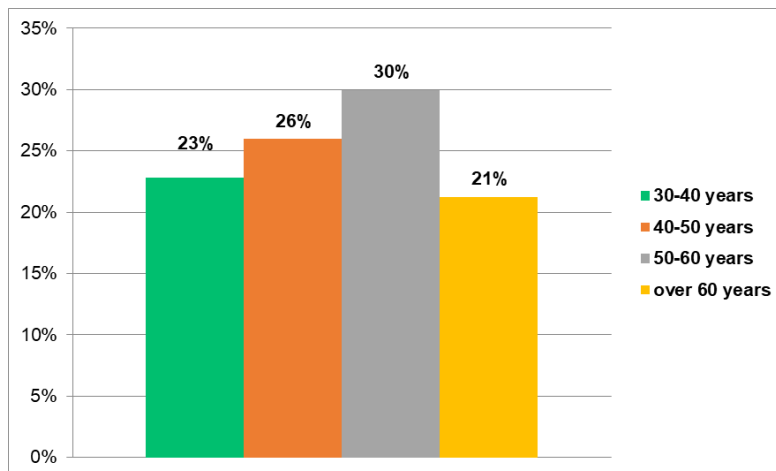
From June 2020 to August 2021 (18 months) we delivered 83 on-line courses reaching nearly 9,000 participants. Through SurveyMonkey® (www.surveymonkey.com), a multiple-choice questionnaire was delivered to almost 3,000 participants in national on-line initiatives promoted by the Institute in the mentioned period. Thus the SurveyMonkey® link to the anonymous survey was sent by email to the participants registered in the learning information system EcmSuite 1.21.13.

A questionnaire was designed with the aim of exploring the attendees' perception and point of view in terms of advantages, limitations, tips, suggestions and recommendations on synchronous learning. The survey form, consisting of 13 questions, has been organised into three sections. The first one (questions from 1 to 5) collected general information useful to outline the respondent's profile (age, gender, profession, number of webinars attended during the considered time period, affiliation). The second part of the survey (questions from 6 to 13) investigated the level of satisfaction concerning IZS-Teramo synchronous distance training offer implemented to satisfy the audience professional learning needs. It also collected useful information to analyse the expectations for the future training offer comparing in-presence and at distance approaches. An open and optional space for additional comments and suggestions completed the survey, allowing us to gather several recommendations and points of views on the training framework provided in the pandemic context.

3. Results

Overall, 574 respondents participated in the survey (approximately 20% of the sample investigated). Women and men answered on an almost equal basis (50% and 50%), 30% between 50 and 60 years old, and 26% between 40 and 50 years old (Figure 1).

Fig. 1 Age Range

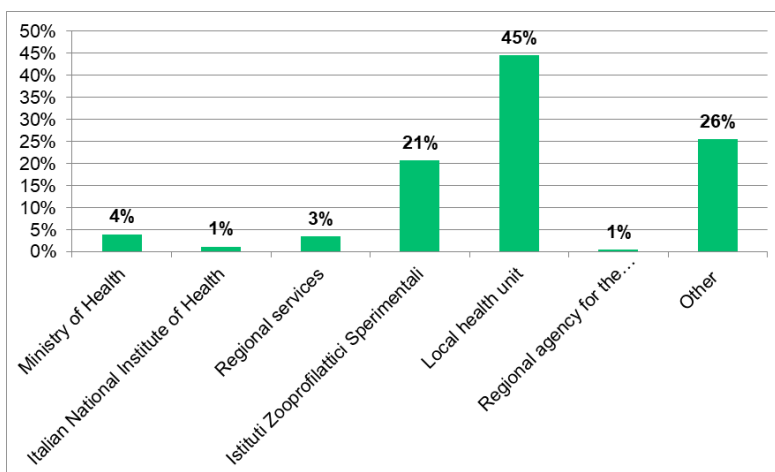


Veterinarians represent the main group of respondents (69%), followed by biologists (8%).

Figure 2 shows the Local Health Units as the main respondents' affiliation (45%), followed by Istituti Zooprofilattici Sperimentali (21%) and by "others" including, for example, universities, trade associations, food industries, farms, public administrations and so on.

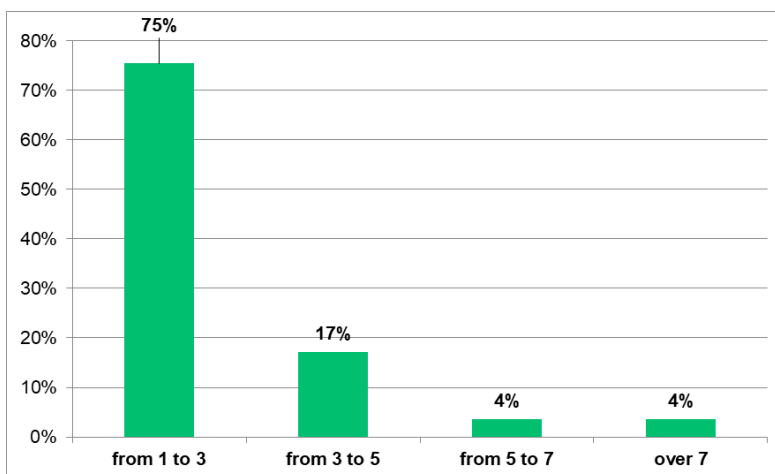


Fig. 2 Affiliations



Most of the respondents (434 equal to 75%) attended from 1 to 3 webinars, while 17% declared they attended from 3 to 5 webinars. A very low percentage has been recorded to all the other categories.

Fig. 3 Participation in the webinars organised by IZS-Teramo in the last 18 months



Questions n. 6 onwards analysed participants' appreciation and their satisfaction level. Concerning the webinars' quality: 97% of the respondents expressed a positive evaluation, indicating scores from 3 (fair) to 5 (excellent) along a Likert scale from 1 to 5 being 1 equal to "rare". The majority of respondents (52%) expressed their appreciation choosing value 4 (good).

The question concerning the satisfaction of learning needs was a closed ended question (yes/no), with a specific further request to motivate the answer given. This option allowed us to adopt the SWOT Analysis model for a general evaluation of the answers. The following table reports the main strengths, weaknesses, opportunities and threats identified by the participants related to synchronous activities. In general, it is possible to consider that the positive aspects have a prevalence on the negative ones.

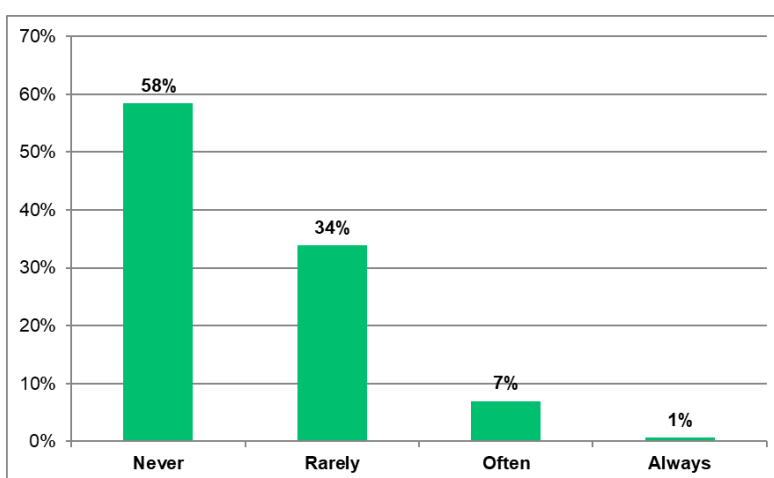


Tab. 1 Swot Analysis

STRENGTHS	OPPORTUNITIES	WEAKNESSES	THREATS
<ul style="list-style-type: none"> • Flexible • Comfortable • Convenient • Practical • Safe • Easy to use • More respect of the scheduled time • Direct 	<ul style="list-style-type: none"> • Scalable • More autonomous and customised learning choice • Improvement of digital skills 	<ul style="list-style-type: none"> • Ineffective, passive learning tool • Frequent failures and technical problem issues • Lack of interaction and communication 	<ul style="list-style-type: none"> • Synchronous learning discloses digital incompetence and other skill lacks

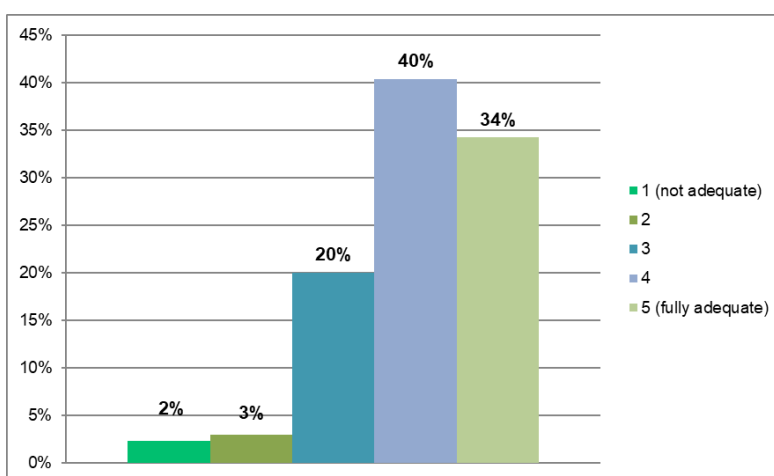
The figure 4 shows the percentage of technical troubles met during synchronous learning activities. 58% of interviewees declared they never had technical troubles in webinars held by IZS-Teramo, while 34% rarely met technical difficulties. A small percentage stated to have often or always technical difficulties during webinars.

Fig. 4 Technical difficulties during webinars



The last 4 multiple-choice questions focused on the participants' appreciation towards the return to residential courses or the preference to use mainly synchronous training in the post pandemic period a balanced use of both the options. In line with the previous considerations, coming back to face to face activities was considered inadequate, anachronistic and expensive, even if interpersonal relations and networking still remain the most relevant advantages of residential training.

Fig. 5 Evaluation of a prevalent use of synchronous training in the near post pandemic future



The main use of synchronous training in the near post pandemic future was considered adequate by the 40% and fully adequate by the 34% of the respondents.



A balanced mix of residential and synchronous training activities is fully adequate for 32% of respondents, not adequate for the 6% of them. Among them, 313 respondents would prefer participating in 30% residential courses and 70% at distance on annual basis.

The last open question confirmed the general positive approach towards synchronous training activities and the limited negative attitude towards this methodology (just one person out of 70).

4. Conclusions

The survey analysis helped IZS Training and Project Management Unit in exploring the satisfaction perception of the respondents on web based training methodologies in order to better define the near future training offer. Started as emergency remote learning, it represents now a “new normality” that can be extended as a routine process as long as it improves and facilitates the interactive aspect for an effective learning, encouraging new adult-centred learning approaches. This means that a significant investment should be done on virtual methodologies, for example to increase the use of immersive learning for customised learning experiences or using artificial intelligence to analyse individual learning needs.

The so-called digital transition for public administrations represents a precious lever to enhance the technological background of the target group of beneficiaries and limiting the technical difficulties sometime encountered.

The new web based learning models also guarantee scalable learning procedures for a wider and prompt knowledge sharing, appropriately planned and carried out involving skilled personnel able to combine appropriate learning methodologies and advanced technical competencies.

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