

Superusers of Self-Paced Online Learning on OpenWHO

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Abstract. Introduction: OpenWHO provides open-access, online, free and real-time learning responses to health emergencies, which includes capacitating healthcare providers, first liners, medical students and even the general public. During the pandemic and to date, an additional 40 courses for COVID-19 response have led to a massive increase in the number of learners and a change in user's trends. This paper presents initial findings on enrollment trends, use and completion rates of health emergency courses offered on OpenWHO. Methods: The enrolment data statistics were drawn from OpenWHO's built-in reporting system, which tracks learners' enrolments, completion rates, demographics and other key course-related data. This information was collected from the beginning of the OpenWHO launch in 2017 up until October 2021. Results: Average course completion rate on OpenWHO including all courses and languages was equal to 45.9%. Nearly half (46.4%) of all OpenWHO learners have enrolled in at least 2 courses and 71 000 superusers have completed at least 10 courses on the platform. Conclusion: WHO's learning platform during the pandemic registered record high completion rates and repeat learners enrollment. This highlights the massive impact of the OpenWHO online learning platform for health emergencies and the tangible knowledge transfer and access to health literacy.

Keywords. COVID-19, e-learning, online learning, pandemic, World Health Organization

1. Introduction

OpenWHO offers open-access, online, free and real-time learning responses to health emergencies [1]. During the pandemic and to date, an additional 39 courses for COVID-19 response have led to a massive increase in the number of learners and a change in users' trends, especially that the courses are multilinguistic and offered in more than 60 languages. It is noteworthy to mention that the pandemic, along with the consequent imposed social distancing, boosted online learning, as face-to-face education was challenged [2]. Although online learning increased globally exponentially, massive open online courses (MOOCs) are still very much challenged by high dropout and low completion rates [3, 4] It is believed that globally only 10% complete online courses, even if free [5, 6]. The COVID-19 pandemic increased demand for online learning, especially health emergencies-related topics. In the time frame from January 2020 to October 2021, OpenWHO recorded more than 5.68 million enrolments. During the early

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2-year pandemic period a total of 96 new course topics were launched and translated across 57 languages, and each course representing a new topic on the pandemic. This paper presents findings on enrollment trends, use and completion rates of courses offered on OpenWHO and describes the use cases that are showing striking commitment.

2. Methods

The enrolment data statistics were drawn from OpenWHO's built-in reporting system, which tracks learners' enrolments, completion rates, demographics and other key course-related data. Data was collected from the launch of OpenWHO in 2017 up until October 2021. Data were aggregated in R. The descriptive statistics were calculated using Microsoft® Power BI tool. Key outcome variables of interest were users' self-reported data such as on location, gender, language, age, affiliation, along with course-based statistics such as number of courses enrolled in and completion rates.

3. Results

The average course completion rate on OpenWHO platform is 46.02% (n = 2,686,569 enrolments completed at 80%). The platform has issued more than 3.3 million certificates: 47.90% (n = 1,592,308) of them were for Confirmation of Participation (CoP), a certificate that is generated when 80% of the learning content of the course is completed. 52.10% (n = 1,732,024) of the certificates were for the Record of Achievement (RoA) that testifies the learning content and the end of course assessments have both been completed at least at the level of 80%. Nearly half 46.4% (n = 1,070,551) of all OpenWHO learners have enrolled in at least 2 courses (2.3 courses). These repeat learners are defined as learners that join multiple courses. Seventy-one thousand learners have completed at least 10 courses on the platform, we call them therefore superusers.

Table 1. Learners on OpenWHO and how many courses they have enrolled to.

Number of OpenWHO courses	Enrolled users	Proportion (%)
1	1234900	53.6%
2	498542	21.6%
3	225369	9.8%
4	111792	4.8%
5	64013	2.8%
6	37935	1.6%
7	24226	1.1%
8	18132	0.8%
9	19439	0.8%
10+	71103	3.1%
Total	2305451	100%

Male learners (57.0%) were more represented than female learners (42.9%) among superusers, whereas women (51.7%) narrowly outnumbered men (48.1%) across the platform overall. The age groups of 20 to 39 years old represents 45.0% of all users. People aged 20-29 years old were more represented among superusers (49.2%) compared to other age groups and are similarly the most dominant age group across all OpenWHO learners. The majority of these superusers are from India (54.3%), followed by the United States of America (4.4%), the Philippines (3.3%), Pakistan (3.0%), and Nigeria (2.4%).

Although India also contributes the most overall enrolments to the platform (28.8%), the proportion of superusers from India is almost double that figure. Further, when comparing the figures with respect to the countries', territories' or areas' population size, the island of Guam brings the most users per capita; 5 % of Guam's population has enrolled in the platform courses. Of the top 20 countries, territories and areas, 17 are small islands when comparing the number of enrolments per 100.000 inhabitants.

Students (31.2%) and healthcare professionals (26.5%) made up more than half of superusers, mirroring overall platform trends. The most popular courses among superusers are the following COVID-19 topics: introduction to COVID-19, infection prevention and control, country preparedness and response, ePROTECT respiratory infections and personal protective equipment.

4. Discussion

Findings show that the average course completion rate on OpenWHO is 45.9% versus a global average of around 10% [4]. This noteworthy phenomenon might be explained by various factors of OpenWHO use. First, the kind of courses offered are of importance in the pandemic. OpenWHO offers courses designed for the immediate learning needs of healthcare providers, frontline responders, planners, vaccination roll out, to cite a few. Contrary to that, general MOOCs, even if free, show 90% dropout, because people enroll in them as they believe they are constructively filling their time [5]. The MOOCs' low completion rates have not improved over the years [6]. MOOC users can be divided into four categories: lurkers, drop-ins, passive participants, and active participants [3]. Our findings suggest that OpenWHO users are likely to be "active" participants compared to other categories that fit more college students, or people filling their time with online learning. Another study highlights that the majority of MOOC participants sign up for a course with no intention of finishing it or earning a degree. In contrast to OpenWHO, modules deemed useful can be done and the rest can be skipped on other platforms; users' goal is to study rather than obtaining credentials on such platforms [7].

Secondly, courses on OpenWHO have been proven to be equitable [8], multilingual offered in more than 60 languages [9], easy and freely accessible [1]. Furthermore, the type of learners could be highly self-motivated due to multiple factors, such as the emergency itself, their role at work and the need for imminent response. This is in contrast to general MOOCs where people enroll for different reasons and drop out because of language difficulty [7]. Another aspect is the fact that the pandemic also led to increased learner commitment, with learners more likely to complete courses than prior to the pandemic. This analysis showed that these are especially courses related to COVID-19. This emphasizes the learner's commitment to learn about topics such as screening, management and controlling, given the fast-growing necessity to act and limit the spread of the virus [1]. Moreover, OpenWHO offers learners two distinct possibilities of either reaching a Certificate of Participation or a Record of Achievement, the latter being released on passing at least 80% of a test at the end of the course. The importance of this choice is that it allows learners to get proof of their time spent in the learning experience which is required in terms of work-time accountability by their employer.

Similarly, our results show repeated learners to be very frequent and to have exceptional superusers that completed more than 10 courses. This may be due to the same aforementioned motivators, potentially, along with flexibility of time, accessibility, low-band width and need.

India accounted for the most enrolments in gross numbers and even larger representation among the superusers. This is in line with the soaring of online education in India during the pandemic [10]. A similar online education platform, Coursera, has also reported a remarkable rise in enrolments from India, equaling 49% in growth of learners from India, making it the world's second largest market after the United-States since June [11].

5. Conclusions

In conclusion, our findings highlight the massive impact of the OpenWHO online learning platform for health emergencies and the tangible knowledge transfer translated into high completion rates, and repetitive enrolments. This proves the efficiency, effectiveness and equitability of the learning product that the World Health Organization offers via OpenWHO.

Future research assessing the long-term effects of online learning on health emergency preparedness and responses is needed to better understand the key players for enhanced online learning experience which permitted users globally to access credible health literacy.

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