

FluComm Pilot Test Report

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Introduction

FluComm is a self-paced online course, in English and Spanish, focused on preparedness and response against public health threats, including the Influenza (H1N1) 2009. The idea and design of FluComm was a collaborative effort of various areas of the Pan American Health Organization/ World Health Organization (PAHO/WHO) such as Emergency Preparedness and Disaster Relief, Family and Community Health, Sustainable Development and Environmental Health among others; and institutions such as the Educational Development Center (EDC) and Centers for Disease Control and Prevention (CDC). The course was developed for a variety of audiences including nurses, doctors, mayors, university students, teachers, among others, of Latin America and the Caribbean regions and is available on PAHO's Virtual Campus under *Influenza* at <http://cursos.campusvirtualsp.org/> at no cost to the user.

FluComm consists of two modules. The general module contains four sections focused on how to address pandemics with knowledge quizzes after each section. The approximate time to complete each section is 30 minutes. The second module has five sections, also referred to as toolkits, with specific information for local organizations, such as schools, health services, workplaces, municipalities, faith-based organizations and other civil society organizations, on preparedness and response. The duration of each toolkit is approximately 20 minutes. Additionally, FluComm offers a certificate of completion at the end of the course after the participant has passed every quiz with a score equivalent to 80% or greater.

To ensure this course adequately fulfills the needs for the countries of the Americas, we conducted a virtual pilot test over a period of six months using the final version of FluComm in Spanish and English. The following report presents the details of the pilot testing.

Methodology

Selection of methodology

After consulting with the Educational Development Center, partners that helped develop the course FluComm and with previous experience evaluating online educational programs, they suggested conducting a virtual pilot test of the course. This methodology had been previously used by EDC to test other on-line courses and a similar methodology had been used by the US Department of Health and Human Services to test the usability of websites (US Dept of Health and Human Services, n.d.; Krug, 2005).

The evaluation process consisted of completing the course FluComm in either Spanish or English, as well as an online survey and a virtual interview.

The purpose of the survey was to provide an overview on satisfaction of the course friendliness, content, language, length, and to measure the reaction and interest of the participants in the course. To actually reveal the participants dissatisfaction about the course and to identify technical problems, we

complimented the surveys with a virtual interview. All participants were invited for the interview but not all were interviewed. The interviews were conducted by a facilitator via telephone or Elluminate, depending on the format suitable to the participants. Each facilitator completed an interview worksheet per participant, see annex A, and asked for details about questions answered with “uncertain, disagree, and strongly disagree” to further investigate their response.

Subjects

To recruit participants, PAHO head quarters sent a memo, in English and in Spanish, to all of the PAHO offices in Latin American and Caribbean countries asking for their support and participation. Additionally, an e-mail was sent to PAHO’s social networks and list servs. Approximately 60 people responded, but only 28 of them completed the course and answered the online survey, and only ten of the 29 were interviewed.

The selected participants represented live in different geographical areas of the Americas: North America, Andean region, south cone, Central America and the Caribbean - the number of participants was not equally distributed among the regions. Additionally, PAHO experts from two country offices also piloted the course and answered five specific questions to provide input on the technical aspects. The majority of the participants (18) took the course in Spanish and the rest in English (12). The following tables describe the demographics of the convenience sample:

Table 1. Participants’ Demographics

Country	Number of Participants	Gender		Course Language		Online Survey	Interview
		Male	Female	Spanish	English		
<i>Chile</i>	2	2	0	2		2	1
<i>Colombia</i>	4	1	3	4		4	1
<i>Cuba</i>	2	1	1	2		2	
<i>Ecuador</i>	2	2	0	2		1	1
<i>Guyana</i>	5	1	4		5	5	1
<i>Mexico</i>	3	2	1	3		3	2
<i>Paraguay</i>	1	0	1	1		1	
<i>Peru</i>	2	1	1	1		2	1
<i>Suriname</i>	1	1	0		1	0	1
<i>Uruguay</i>	1	0	1	1		1	
<i>USA</i>	8	2	6	2	6	8	2
TOTAL	31	13	18	18	12	29	10

Recording and analysis

To collect, record and analyse quantitative data we used *Survey Monkey*. This program allowed us to develop an online survey in both languages, Spanish and English, and send personalized e-mails to every participant with a link to the FluComm survey. In addition, we sent automated friendly reminders on a weekly basis to increase our response rate using the same program.

The qualitative data was collected once the participants responded to the online survey. As we received the completed survey, we contacted them by e-mail and invited them to attend a virtual or telephone interview. Each facilitator followed the same guidelines and used the same worksheets as well as instructions developed specifically for the interview. The worksheets contained questions regarding website friendliness, navigation and usefulness of the website features (i.e. narrator, graphs, etc.). In addition, suggestions were requested about what they liked the most and least about the course. As the participants were interviewed, the facilitator wrote up notes based on observations and responses received from the tester. The facilitator recorded comments and suggestions on the respective worksheet. This information along with the open question responses from the surveys were read and organized under eight categories: technical aspects and navigation, understanding of the course content, accuracy of the course language, audience reaction and interest of the message/course, creditability of the message, best features about the course, least liked features about the course, and suggestions/ improvements.

Results

Overall, the comments from the interviews and responses from the online surveys were satisfactory; table 2 shows a summary of the survey results and table 3 and 4 show the participants' comments.

In general, the course content was understood, useful and interesting for the audience. The majority of the participants (96%) were satisfied with the course, 93% agreed that the objectives were met, and 96% would recommend the course to others. Additionally, 90% and 96% respectively, of the participants learned something new from the course and confirmed that the quizzes were helpful in reinforcing the information presented.

The interviews demonstrated that the course content was pertinent and applicable for most of the targeted communities. Also, participants were satisfied with the methodology used for this course, on-line based, permitting the user to take the course at their convenience; though the survey indicated that 62% of the participants found the course design difficult to navigate in addition to facing technical problems with the certificate and internet. Participants also identified a problem with the translation of the course and its particular focus on the pandemic influenza H1N1.

Among the most relevant suggestions to improve the course, participants made an emphasis on changing the focus from influenza H1N1 to just a pandemic and to eliminate the technical problems such as issuing the certificate, proving links that work, and improving the speed of beginning each section.

Another suggestion was to use data from the region for the examples and graphs to make the information more tangible. A participant suggested using materials developed in the countries as examples in the toolkits and also using case studies from the countries. Lastly, a thorough syntax and grammatical revision of the FluComm in Spanish was suggested by many participants.

Table 2. Online survey results

Survey Questions	Results in %			
	Strongly Agree + Agree	Uncertain	Disagree	Strongly Disagree
1. The objectives for the course were clearly stated in the introduction	100	0	0	0
2. The course objectives were met	93	7	0	0
3. Graphs, illustrations and examples helped me to better understand the course content	93	7	0	0
4. The difficulty of this course was appropriate for my level of training	84	3	10	3
5. Links to other external sources and references were relevant and reinforce the course content	96	3	0	0
6. The “knowledge check sections” were helpful to my learning process	96	3	0	0
7. The questions asked in “knowledge check section” were covered in the course	100	0	0	0
8. The course provided me with new knowledge	90	0	7	3
9. The course is relevant to my work	86	7	7	0
10. The content of FluComm was accurate	100	0	0	0
11. I trust the sources listed as references	100	0	0	0
12. The knowledge gained from FluComm has changed the way I will perform my job	76	7	14	3
13. The course web design was easy to navigate	62	24	7	7
14. The letter font size was adequate for easy reading	100	0	0	0
15. Illustrations throughout the course were easy to read and adequate in size	90	7	3	0
16. The layout of the course was attractive	93	7	0	0
17. The interactive graphs, links and buttons worked properly	80	10	10	0
18. I would recommend this course to others	97	3	0	0
19. The time length of the course was appropriate	86	7	7	0
20. The course content was organized in a logical sequence	97	3	0	0
21. Overall, how satisfied were you with the course?	96	4	0	0

Table 3. Summary of participant comments- category 1-4

Technical aspects and navigation	Understanding of the course content	Accuracy of the course language	Audience reaction and interest of the message/course
<ul style="list-style-type: none"> • The course did not issue certificates to the participants^{1,2,3,4,5,6,7,8,9,10} • Difficulty downloading, saving and printing the sample materials offered in the toolkits^{1,3,5}. • Narration was very useful; however, narrator could provide additional information¹. Helpful when you're not in the mood to read, but can listen and read along^{1,6}. • Registration process was complicated and it logged me off automatically⁷. • Homepage, menu for courses is only in Spanish, not in English⁸ • Section 2 did not save the "knowledge check" information⁶ • It was difficult to access some of the modules^{1,6,7} • Many windows opened every time you clicked on a section, making the learning process complicated and time consuming • There is not enough access to other courses (Health Determinants), too much bureaucracy upon accessing the courses¹ 	<ul style="list-style-type: none"> • The content was excellent, easy to understand, important and relevant^{1,2,4,5,6,9,10} • Content of the course was consistent with the objectives. Each section provided different aspects of the subject, offering a better comprehension of the pandemic influenza⁶ • Glossary was very useful^{1,8} • Section 1 seems directed to physicians, could be difficult to understand for some of the target audience⁴ • Some questions in "knowledge check" were too similar, and hard to understand what was being asked⁹ • Professional content; specific expertise needed to evaluate the contents. • The handouts in the 2nd module are rich in information and can be adapted to local situations². • Section 2 was confusing, hard to understand and did not specifically explain how to develop a response plan, it should include a step by step⁹ 	<ul style="list-style-type: none"> • Needs adaptation to specific target audience: their level of understanding, the language used, jargon, socio-economic, country and culture specific adaptation¹⁰ • Many grammar errors in the Spanish version². On multiple occasions "si" was written as "is," "hace" as "have" and "ni" as "in."^{2,4} • Some words were not well translated and it did not make sense^{6,9} • The terminology used in section 1 was very technical and probably unnecessary for the audience to which this course is directed⁴ 	<ul style="list-style-type: none"> • Duration of the course is adequate^{1,6} • Learned helpful information which I did not know⁶ • The 30 minutes mentioned as needed per section was not enough for me. Some sections needed double the time to apprehend the material¹⁰

Table 4. Summary of participant comments- category 5-8

Credibility of the message	Best features about the course	Least liked features about the course	Suggestions/ improvements
<ul style="list-style-type: none"> The content provided useful references³ The presentation contained important and interesting information/subjects^{1,2,4,5,6} The handouts provided in the toolkit are very useful and I would like to use them in the communities¹ 	<ul style="list-style-type: none"> The reference links provided⁵ The innovated process and methodology used for the course^{7,1} Being able to acquire new knowledge that I can implement in my workplace¹ Ability to take the course in the form that was structured, and the subjects covered were of excellent quality⁷ The focus in working with the community was important and adequate⁶ Toolkits gave ideas for acquiring better communication with the community⁶ Images and illustrations helped in the understanding of the course⁶ Links can be open in different windows, and there is easy access to the materials⁶ Being able to take the course any time you want^{6,3} The “knowledge check” section in every module are very useful, well designed and challenging^{4,6} The link of the course sent by e-mail helped in reducing the time of search and facilitated the access of the course⁸ The content was consistent with the objectives outlines. Each area provided a different aspect of the general topic which in itself offered a better understanding of the influenza pandemic⁸ 	<ul style="list-style-type: none"> There were many technical difficulties in accessing the sections of the course¹ It contained too much information, and at times it became a little tedious⁷ The modules were difficult to navigate¹ There were some problem with the links given in the modules^{1,4} Figures used only showed influenza in global terms² The course feels a little impersonal, there is no interaction with other participants^{1,2} In many occasions, the narrator’s voice was cut off. At times, the narration is too slow and monotonous and it couldn’t be turn off³ The links in the toolkit section in the Spanish version are in English⁶ In many occasions the modules are very slow to access making the participant loose interest^{6,7,9,1} Figures/graphs were blurry and it could not be enlarged^{1,3,5} Technical problems^{1,6} The initial navigation to figure out where to locate the virtual course⁸ Documents could not be download and saved on your computer⁵ 	<ul style="list-style-type: none"> Modules could be broader and include summaries of the information learned Being able to download the information into the computer to review it afterward⁵ Easier access to find the course among others within the virtual campus¹ Follow-up courses with continuing education should be implemented, not only when there is an emergency^{5,6} Improvement in the modules of communication and preventive measures¹ Important to include information on vaccines³ A timeframe of study should be included in the modules^{2,6} Course should be personalized¹ Figures, illustrations, and examples should be at national level² Letter sizes should be larger, especially for the older population^{1,2} The toolkits should be in a more visible place, perhaps side by side the other sections⁶ Update the text to the post-pandemic situation (pandemic H1N1 is over) Make it a general pandemic planning and preparedness course^{4,9} The course should be directed to pandemic influenza in a general context, this point would have to be reflected in the “knowledge check” also^{1,4,9,10} Objective and/or modules should be added for the post-pandemic, and to show why “being prepared” is important for other emerging/re-emerging infectious diseases and/or pandemics Lessons learned, documents, and events of June 2009 should be included in the virtual course The technical area of communicable disease of PAHO has been advocating the utilization of the term influenza in the place of flu/ “gripe”. This course has used both terms, and for that reason only one term should be used (influenza)⁴ Restructure of Module 2, make it more simple and concrete⁹ Include materials of countries that have worked on influenza, it can expand the range of materials⁹ Perhaps images/graphs should give a regional approach or per country, or even use case studies as examples^{2,7,9} The lists of resources in the toolkits section should direct the user to websites/pages created for this course that are permanently stored⁴ It will be useful to highlight the words included in the glossary⁷ Terminology used should be modified for high school⁸

Conclusion

The virtual pilot test of the online course FluComm was extremely useful. It provided the participant's feedback about their experience navigating through the website, encountering function and content errors, and the recommendations and suggestions on how to improve the course.

Overall, the course was well received and highly appreciated for its important and helpful content. However, before launching the course internet availability and computer requirements as well as the technical difficulties such as, obtaining the certificate and accessing the sections and modules, will need to be solved. Also, a thorough grammatical and syntax content review, particularly in the Spanish version, will be required so that it will not interfere with the learning process. Furthermore, it is important to keep in mind "branding." If possible, it is suggested to modify this course to pandemics in general.

Although there is room for improvement, feedback from the participants clearly demonstrates that the course is ready to be disseminated in the Americas.

Annex A: Interview Worksheet

Preguntas para la entrevista:

	¿Que pensó de las siguientes características?	¿Qué tan útil o no útil encuentra estas características?
Registro/Página de conexión		
Página de inicio		
Características de ayuda: “Como usar este modulo”		
Función de iconos o botones (empezar, pausar, adelantar, retroceder)		
Enlaces a “Recursos” de fuentes externas		
Esquema en cada módulo		
Glosario		
Narración		
Navegación general del curso: de una página a otra, de módulo a módulo		

- ¿Hay algo del curso que usted cambiaría para mejorarlo?
- ¿Cuanto tiempo le tomó completar este curso? ¿Usted piensa que la duración del curso es adecuado?

Annex B: Interview Worksheet for PAHO experts

PAHO Expert Interview:

- 1- What do you think of the course design?

- 2- Did you find any errors in the course content?

- 3- Is the course up-to-date in terms of content and technical aspects?

- 4- Do you think the course contents are adequate for the target audience?

- 5- Is this course ready to be implemented in your country? If not, what would be required?

- 6- Please list any suggestions or improvements for the course

References:

Krug, S. (2005.) Don't make me think. A common sense approach to web usability. 2nd edition. Chapters 9-11. New Riders Press.

U.S. Dept of Health and Human Services. Usability.gov (n.d.) Retrieved March 2008 from <http://www.usability.gov/refine/learnusa.html>.