

The High Profile Training Event (HPTE) for the Portuguese-Speaking Countries

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Abstract – The High Profile Training Event (HPTE) was a series of interactive online lectures that was broadcast to the World Meteorological Organization (WMO) Members during the second half of October 2006. In order to transmit the same series of lectures in Portuguese language, the Brazilian National Institute for Space Research (INPE)/Center for Weather Forecast and Climatic Studies (CPTEC) has organized HPTE for the Portuguese-Speaking Countries. The present work describes the activities that INPE/CPTEC has accomplished during HPTE for the Portuguese-Speaking Countries and also shows some statistical results based on the evaluation of the event by the participants.

Keywords: HPTE in Portuguese; Satellite Meteorology, interactive online training, VISITview.

1. INTRODUCTION

The World Meteorological Organization (WMO)/Co-Ordination Group for Meteorological Satellites (CGMS) Virtual Laboratory for Satellite Training and Data Utilization (VL) has been established to maximize the exploitation of satellite data across the globe. It is a collaborative effort joining the major operational satellite operators across the globe with WMO centers of excellence in satellite meteorology. The High Profile Training Event (HPTE) was a series of interactive online lectures that was broadcast to WMO Members in each Region during the second half of October 2006, and this initiative is an important milestone in the evolution of the WMO/CGMS VL providing a unique education and training opportunity to WMO Members. These sessions have used an interactive training tool called VISITview (Whittaker 1999) together with Yahoo Messenger for voice. In order to broadcast the same series of lectures in Portuguese language, the Brazilian National Institute for Space Research (INPE)/Center for Weather Forecast and Climatic Studies (CPTEC) through the Satellite and Environmental Systems Division (DSA) has organized HPTE for the Portuguese-Speaking Countries in the period 13 to 20 November 2006. Accordingly, this article describes the activities that INPE/CPTEC has accomplished during HPTE for the Portuguese-Speaking Countries and also shows some statistical results based on the evaluation of the event by the participants.

2. VISITVIEW, INSTRUCTORS AND SESSIONS

VISITview is an interactive training tool that was developed by the Virtual Institute for Satellite Integration Training (VISIT) Program allowing distance learning and multiple users to view and manipulate the same series of pages. The VISITview teletraining software (www.ssec.wisc.edu/visitview/) is designed to provide

instructors and students with a set of easy to use tools for creating, conducting and taking teletraining sessions (Whittaker, 1999). It is worth noting that the VISITview teletraining approach allows putting the instructors directly in contact with the students and the benefits of this direct interaction and the savings in travel costs are well worth the effort involved with the teletraining approach (Purdum and Mostek, 2001).

Instructors for the teletraining sessions are staff from INPE/CPTEC and the Portuguese National Meteorological Service (IM). Thanks to the flexibility of the VISITview teletraining approach, instructors can be located in Brazil and Portugal. Four core interactive online lectures covering a broad range of topics were broadcast in Portuguese language by the above-mentioned instructors: 1) Lecture A - WMO Space Program Satellite Capabilities Virtual Laboratory; 2) Lecture B – Spectral Bands and Applications; 3) Lecture C - From digital data to products; 4) Lecture D - Severe Convection and heavy rainfall.

In general, HPTE for the Portuguese-Speaking Countries have jointed approximately 70 persons per day viewing the online lectures and it is worth emphasizing that the online lectures from website have worked very well. In this respect, none of the users has reported problems and the VISITview software has proven to be a very robust tool for training. INPE/CPTEC has also made all lectures available for download.

As some technical problems have occurred with the Yahoo Messenger (please, see the description below) mainly in the Lectures A and B, which were solved for Lectures C and D, all the lectures were repeated for those participants who had audio/voice problems during the regular calendar. It seems that Yahoo does not support a great number of participants (more than 50) at the same conference. In such case, Yahoo itself starts disconnecting the participants. In addition, Yahoo stops sending the invite to the participants for joining the conference. It is worth noting that almost all problems with Yahoo Messenger were solved for Lectures C and D by splitting the participants into two distinct conferences, which one with approximately 35 persons, using the same computer and Yahoo ID. This tip allows to continue using only one microphone and getting conference very stable.

3. RESULTS

Participants have completed and returned an evaluation questionnaire in order to assist the organizers in evaluating HPTE and to improve the planning and preparation, publicity, content and delivery of any similar future training event. Statistical results based on the returned evaluation questionnaire for 2006 WMO

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HPTE for the Portuguese-Speaking Countries are shown in the present section.

3.1 The Participant

Results shows that nearly all participants are from Brazil (94%) followed by Sao Tome and Principe (3%), Mozambique (1%) and Portugal (1%), and Figure 1 displays the type of organization or institution they belong to. It is worth mentioning that the Group “Other” in Figure 2, with 34% of the participants, is composed of institutions such as the Brazilian air force, technical colleges, and airlines, agricultural and telecommunication companies.

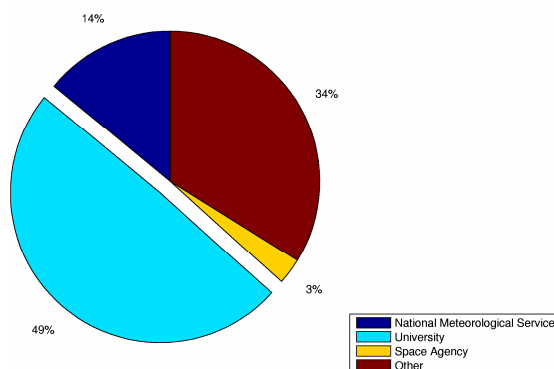


Figure 1. Pie chart indicating the organization or institution type of the participants

Only 18% of the participants were previously aware of the WMO Virtual Laboratory and no more than half of this number has already accessed the learning resources or material. The obtained results stress the importance to make the WMO Virtual Laboratory more widely known. After the event almost all participants (93%) expect to use the VL resources in the next 12 months. This result is very impressive since a great number of participants (83%) were not previously aware of the WMO Virtual Laboratory before the HPTE for the Portuguese-Speaking Countries. The participants expect using materials mainly related to satellite image interpretation in order to increase the forecast skill, satellite and radar precipitation estimation, deep convection and heavy rainfall, FORTRACC (remote sensing system of INPE/CPTEC for nowcasting and evolution of convective systems), fire and deforestation detection using satellite data, hydrology, and also the lectures A, B, C and D.

The participants have commented that an effort should be done to make the WMO Virtual Laboratory more widely known within the meteorological community and with particular attention to graduate students.

3.2 Resource Material

Figure 3 shows how the participants have received the HPTE lecture material.

It is worth noting that 44% of the participants have rated the instructions to install and run the lessons as excellent, 43% as good, 7% as acceptable, 4% as poor and 1% as useless. With respect to the instructions to install and run the audio software, 36% of the participants have rated it as excellent, 44% as good, 11% as acceptable, 7% as poor and 1% as useless. The organizer

committee has realized that a priori practice sessions are extremely important to answer doubts of the participant and to make them more comfortable with VISITview and Yahoo messenger tools, which in turn may prevent technical problems from occurring during the event.

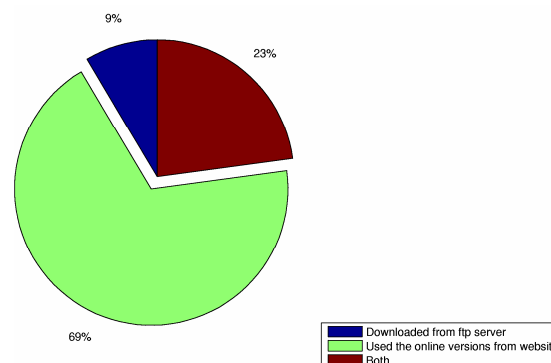


Figure 2. Pie chart indicating how the participants have received the HPTE lecture material

The following list shows the main topics that the participants would like to have seen included in the event: environment studies, ocean-atmosphere interaction (e.g., El Niño and La Niña), meteorological radar, remote sensing applied to agriculture; meteorological events affecting Brazil and Latin America, cloud classification based on remote sensing data, weather discussion; FORTRACC (remote sensing system of INPE/CPTEC for nowcasting and evolution of convective systems), satellite image interpretation, oceanography, urban heat island and thermal discomfort, and air pollution.

Nearly all participants have answered that nothing should be dropped and also that the content was very well selected and relevant. Some participants believe that the topics should be discussed in more detail.

3.3 Participant's Impression

Figures 3-11 show the results respecting to questions about participant's impression on the course.

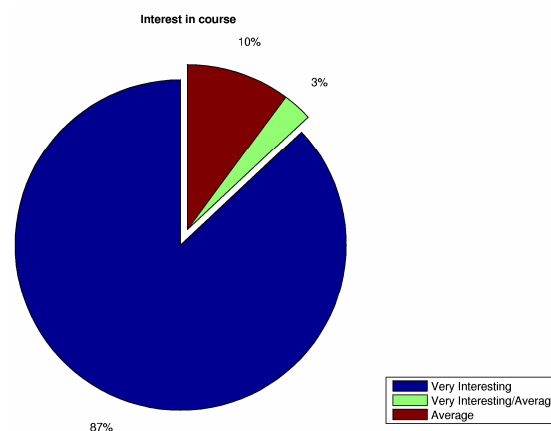


Figure 3. Pie chart displaying the participant's impression respecting to interest in course.

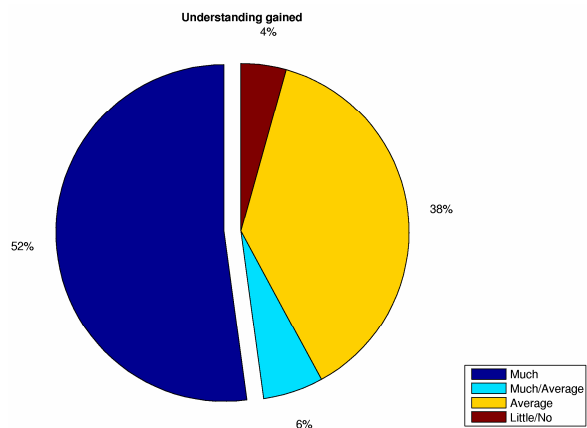


Figure 4. As in Figure 3, but respecting to understanding gained.

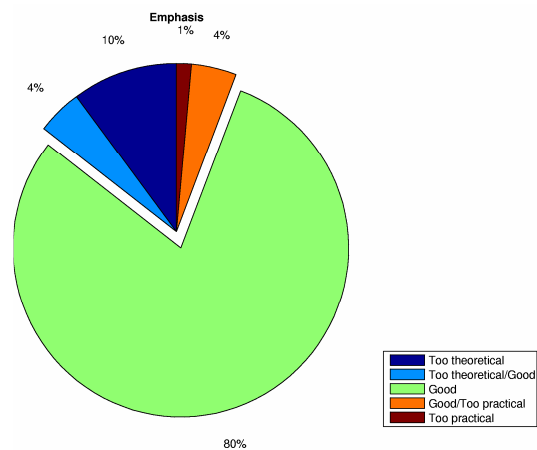


Figure 7. As in Figure 3, but respecting to emphasis.

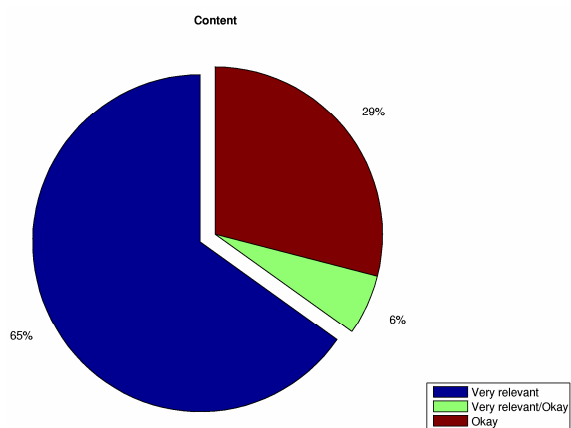


Figure 5. As in Figure 3, but respecting to content.

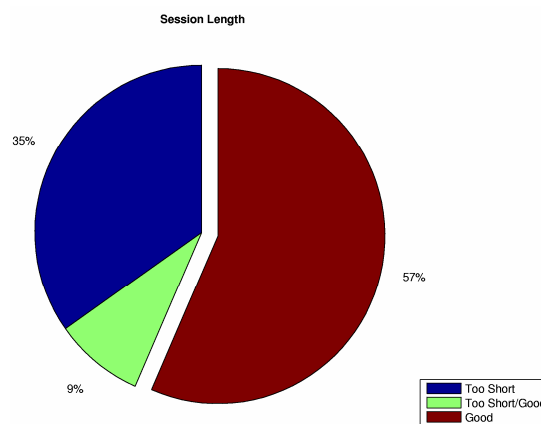


Figure 8. As in Figure 3, but respecting to session length.

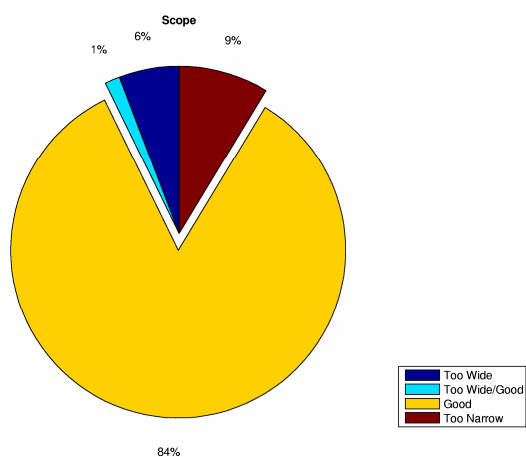


Figure 6. As in Figure 3, but respecting to scope.

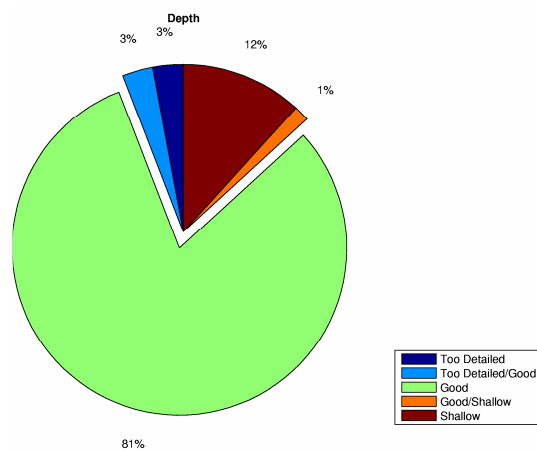


Figure 9. As in Figure 3, but respecting to depth.

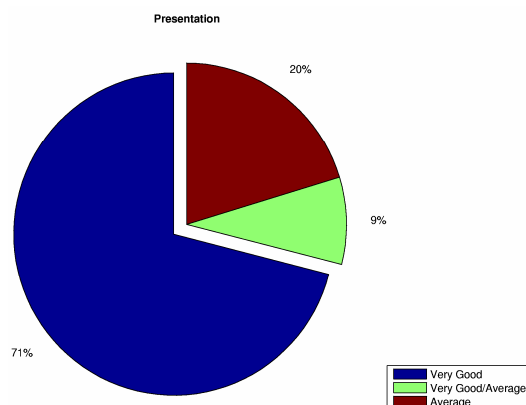


Figure 10. As in Figure 3, but respecting to presentation.

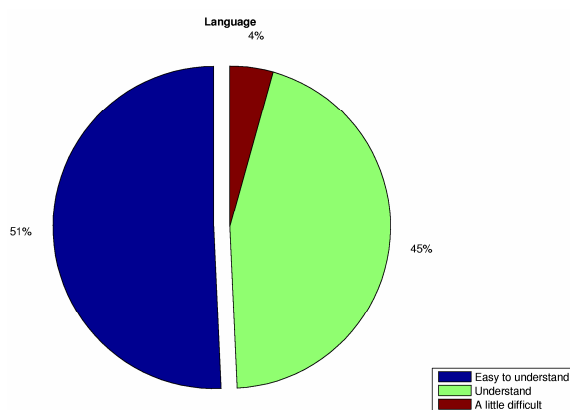


Figure 11. As in Figure 3, but respecting to language.

It is worth noting that 100% of the participants would like to participate in another event like HPTE in the future. This result is very impressive and shows that, even with the audio problems occurred in the 2006 HPTE, all participants expect to participate in a new on-line event via Internet using the VISITview tool. When asked about the reason for taking part in another event like HPTE in the future, almost all participants have affirmed that the lessons were very important to improve their knowledge of remote sensing since this subject is very important in nowadays, and also to be familiar with the satellite products that are currently produced and delivered by the different remote sensing centers. In addition, the participants have stressed the significance of an on-line course via Internet into a large country such as Brazil since there is no need of dislocation to another place, no travel cost (flight ticket and accommodation), the course is free, with high quality, from a center of excellence as INPE/CPTEC, and the instructors are expertise on the subject.

In general the participants have said that knowledge gained will be important in their activities since they feel more comfortable in using satellite data and products (e.g., now it is easier to them identify severe storm events using satellite imagery).

Participants linked with education (such as professors and instructors) are very interested in VISITview and intend to use this tool for teaching (e.g., briefings for the Brazilian air force pilots).

4. CONCLUSIONS AND RECOMMENDATIONS

We would like to remark that the results stress the importance to make the WMO Virtual Laboratory more widely known since solely 18% of the participants were previously aware of the WMO Virtual Laboratory. Another result very impressive is that 100% of the participants would like to participate in another on-line event via Internet using the VISITview tool (like HPTE) in the future since the lessons were very important to improve their knowledge of remote sensing, there is no need of dislocation to another place, no travel cost (flight ticket and accommodation), the course is free, with high quality, and the instructors are expertise on the subject.

The main concern of the participants is related with the continuity of this kind of initiative and with the frequency of the on-line courses. In fact, they are afraid that this scheme discontinues. They believe that the courses should be offered periodically (e.g., at least three times per year) and that should be formulate an annual calendar with the future offered courses.

The following list contains the main suggestions made by the participants: 1) Almost all participants have reported the problems with Yahoo messenger and that the audio should be improved for the next event. They have also suggested finding other software for audio conference such as Skype and TeamSpeak; 2) when the instructors display a new slide they should wait few seconds before start talking since there is a time delay between the instructor slide and the participant slide; 3) practice sessions prior to the event; 4) the lectures should give more emphasis on the African continent; 5) bibliography should be provided; 6) registration process via website with automatic confirmation via Email.

Finally, it is worth mentioning that that all lectures are still available for download (<http://webaula.cptec.inpe.br/visitview/>) along with instructions for installing and running the VISITview session locally, and also to be viewed directly via Web browser (<http://webaula.cptec.inpe.br/visitview/>). At this moment audio playback with annotation ("VISITview TV") version of the 4 lectures is available from our Virtual Laboratory website (<http://webaula.cptec.inpe.br/visitview/>).

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