Building Capacity of the Public Health Education Workforce Through Partnerships: The Global Health Disparities CD-ROM Project

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Abstract

The Global Health Disparities CD-ROM Project reaffirmed the value of professional associations partnering with academic institutions to build capacity of the USA public health education workforce to meet the challenges of primary prevention services. The Society for Public Health Education (SOPHE) partnered with the California State University, Chico to produce a CD-ROM that would advocate for global populations that are affected by health disparities while providing primary resources for public health educators to use in programming and professional development. The CD-ROM development process is discussed.

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Introduction

Health education associations have a long history of developing partnerships to promote public health and to build capacity of the public health education workforce. In the Summer 2002, the Society for Public Health Education (SOPHE) International and Cross-Cultural Health Special Interest Group (ICCH-SIG) and the SOPHE United Nations Representatives began working with the California State University, Chico, to produce the Global Health Disparities CD-ROM. The idea to publish a CD-ROM with primary resources for health educators grew out of informal discussions between SOPHE U.N. Representatives about the wealth of professional development resources for health educators that were available through the United Nations and non-governmental organizations (NGOs) advocating at the United Nations.

A global health disparities theme was chosen for the CD-ROM. The term "health disparities" is often used to describe the unequal and unfair differences in health status that are the result of social and environmental processes. In the international community, however, the term "health inequities" is the preferred term, that

more effectively characterizes the unfairness and unjust result of social and environmental processes. Organizations and governmental bodies focus on different issues and use various strategies to eliminate the inequities in the global society that contribute to poor health status. Some advocacy groups focus on broad social problems such as: human rights (Symonides & Volodin, 1996, 1999), poverty (IPHN, 2002), economic and sustainable development (UNDP, 2002), environment (WIT, 2001), displacement and disaster (IFRC, 2002), and lack of technology (PATH, 2002). Other advocacy groups focus on specific population groups that are most affected by health disparities such as racial/ethnic minorities (Ma'at et al., 2001), women (UNIFEM, 2001), indigenous people (New Zealand Ministry of Health, 2002), homeless and the poor (UNDP, 2001), and children (UNICEF, 2002). Elected officials contribute to eliminating health disparities legislation to protect or help those who suffer from such social and other inequities in society. Academics and other professionals provide analyses of assessment and measurement processes, statistics, and summaries of the state of global health disparities (EB, 2001).

The primary purpose of the Global Health Disparities CD-ROM Project was to build capacity of the USA public health education workforce to meet current primary prevention challenges in public health education. The objectives were to: 1) provide greater access by health educators to global health disparities information, 2) raise awareness in the public about population groups affected by health disparities, 3) examine how technology may be used in public health education professional development, and 4) examine how health promotion coalitions function.

A well-informed and trained public health education workforce is essential for effective administration of existing health education programs at all levels of organization. The CD-ROM was meant to provide greater access to information that health educators may use for professional development and programming. Training the workforce would ultimately benefit the populations being served.

The Process

The Coalition Partners

The number of coalition partners was limited to Chico State and SOPHE to test the process for producing professional development CD-ROMs. A larger coalition could have been formed to complete the project, but the larger numbers of individuals involved with the project would have unnecessarily complicated the process. Chico State's responsibility was to assemble a draft of the CD-ROM, revise the content and format as recommended by SOPHE liaisons and peerreviewers, and coordinate administrative and logistical tasks necessary to keep the project on schedule. Also, Chico State would provide all of the graphic design for the CD-ROM and related materials. SOPHE's responsibility was to provide project liaisons and suggestions on what documents should be included, advice on format and design, and peer reviewers for the CD-ROM content and format. Team members communicated by e-mail, and to a lesser extent, by telephone.

CD-ROM Format

Primary resources on global health disparities were collected and arranged in a web-based

format during the Summer and Fall 2002. The web-based format was chosen for ease-of-use by the user. Davis' technology acceptance model (TAM) (Davis, 1989, 1993) was used as a guide for the development of the CD-ROM. The TAM is based on the theory of reasoned action (Ajzen, 1985). According to the TAM, positive perceptions of ease-of-use and usefulness promote the intent to use the technology, and thus promote actual use. In this project, the web-based format was also chosen over other formats that required a special software application that users would have had to install on their computers. Although hard data are not available to support, anecdotal evidence suggests that health educators avoid installing unfamiliar software applications on their computers. Using commonly available software applications such as Internet Explorer® and Adobe Acrobat Reader® would not create situations where health educators would avoid using the product; most health educators already have web-related software applications on their desktops. Again, the product had to be easy to use to promote health educator use.

Most of the documents collected were from the United Nations, government agencies of the USA, Australia, and New Zealand, not-for-profit organizations, and professional journals. Over 700 documents were collected, and most were already in Adobe Portable Document Format (PDF) or were converted to PDF. The PDF format was chosen over other formats because it is much more difficult to alter PDF documents.

Initially, the documents were arranged on the CD-ROM according to their originating sources. Keeping the documents together by their originating sources was very important because it allowed for better management of the files. When the permission letters were mailed to the various organizations, a listing of all documents from that organization could be easily assembled. The name and contact information for each organization, complete citations of resources, and the URLs (web addresses) were critical to collect and organize to facilitate the republishing process.

As a technical side note for health CD-ROM developers: Most PDF documents collected from the web for the Global Health Disparities were not properly constructed for the Document Property, Document Security, Open Options, and Bookmarks. The Document Properties, for example, are necessary for PDF search engine queries. Keywords, author, title, and other details are necessary to insert. Long documents with multiple sections should have each major heading bookmarked (these are intra-document links located in the left-hand margin of the screen) to promote easy, modular navigation

through the document rather than scrolling the long document.

A page header design for all of the web pages on the CD-ROM was created toward the end of the process. A simple, temporary header was used to visualize how the final product would look (Figure 1). Of course, for the final CD-ROM, the graphic images used in the header would need to communicate a global theme. A three-dimensional globe overlaid a two-dimensional map of the earth (Figure 2).



Figure 1
Temporary Global Health Disparities CD-ROM Header



Figure 2
Final Global Health Disparities CD-ROM Header

Permissions to Republish Documents

The part of the CD-ROM production process that was the most demanding and frustrating was having to obtain written permissions to republish documents on the CD-ROM. At least six to eight weeks were needed to acquire all of the permissions. Official letters were postal mailed in August 2003, but e-mail requests were soon found to be more efficient. Some organizations, however, insisted that permissions to republish their documents were written on official organizational letterhead and postal mailed.

The letters requesting permissions to republish documents must include the following: 1) name of project organizer, title, and full contact information; 2) sponsoring organization(s) and a description of each; 3) name and full citation of document requesting to republish, including exact URL if online; 4) purpose of republishing document; 5) how many CD-ROM copies will be published; 6) whether the CD-ROM will be 7) indications of compliance with organization's requests such as documents not being altered, listed all on one page; 8) CD-ROM publishing date, 9) deadline for the organization to reply with permission (for follow-up correspondences), 10) complimentary copies will be provided to the permissiongranting organization. The deadline for responses was included only on follow-up correspondences. This deadline was not viewed to be critical on a first contact document. However, some organizations said that they would have responded sooner had they known the deadline. A deadline may be optional for the first contact letter.

A process commonly used in survey research was used in this project: Contact letter, two-week e-mail follow-up, three-week e-mail follow-up, and four-week letter follow-up. If e-mail was used for the first contact, a one-week, two-week, and three-week e-mail follow-ups were conducted. For some organizations, a fifth letter was faxed to the organization.

Most government documents are in the public domain, and written permissions to republish

these documents are not necessary, however, the Project Team obtained written permissions for all possible public domain documents because sometimes it was unclear whether the document posted at a government web site was public domain or copyrighted by an organization that collaborated with the government agency. In other words, just because a document was paid for by a government, that doesn't make it public domain. The not-for-profit organization that published the document still retains the copyright. This precautionary measure proved to be valuable because many documents at government web sites were copyrighted. For example, a document of a national study conducted in South Africa and posted on a South African government web site was actually copyrighted by the Kaiser Family Foundation (KFF, 1995). Had the Project Team proceeded and assumed that government web sites only contained public domain documents, the Kaiser Family Foundation copyright would have been Fortunately, the Kaiser Family violated. Foundation was very generous to allow republishing of all requested documents selected from the Foundation's and the South African government's web sites.

Several lessons were learned related to republishing copyrighted documents. First, a condition for republishing documents that was common across many organizations was that their documents had to be located on the same CD-ROM page. This stipulation in republishing agreements were common, for example, with United Nations bodies. Second, organizations required certain disclaimers and other exact wording to be placed on the CD-ROM on the web page where their documents were all Third, organizations requested that located. their documents being republished were not altered in anyway. Fourth, peer-reviewed journal articles that were published by multipublishing companies national requested exorbitant republishing fees, even though the project was for charitable purposes. journals not controlled by multi-national corporations, with the exception of a few journals, generally permitted republishing of their articles without charging a republishing Medical journals, as a rule, required fee. republishing fees to be paid, with the exception of the Journal of the American Medical Women's Association (JAMWA, 2002). Even USA-based journals insisted outrageous republishing fees, with complete disregard for professional courtesy and the charitable nature of the project. Fortunately, long-time health partners at the American Journal of Public Health (AJPH, 2002) and the American Journal of Health Studies (AJHS, 2002), quickly granted republishing permissions, extending professional courtesy to Chico State and SOPHE for this charitable project. Fifth, permissions to republish documents were not obtained from many USA state governments, and two global organizations. There were no acknowledgements by these governments and organizations of having received any of the communications that the Project Team sent (postal mail and e-mail) or acknowledgements were received after the publishing deadline.

Each of the organizations granting permission to republish their documents were promised complimentary copies of the Global Health Disparities CD-ROM. It was not anticipated, however, that many organizations would request more than one CD-ROM copy so that they may inform Board Members or executives of the project, or to have one copy for their records.

Publishing of the CD-ROM

At first, the Project Coordinator had ideas about mass producing the CD-ROMs at Chico State in both PC and Macintosh formats. However, these ideas were grandiose, considering the amount of time and money it would have taken the project. Thus, only a PC formatted CD-ROM was mass produced by a Northern California CD-ROM printing company. CD-ROMs may be mass produced by either using a duplicator (similar to a CD Writer drive), or may be manufactured by molding liquid plastic in glass molds. Also, the labeling of the CD-ROMs could have been done at Chico State, but the Project Coordinator chose to have the labels silk-screened. Mass produced CD-ROMs are usually labeled using silk-screening techniques (1-4 colors), rather than paper labels or thermal

imaging processes. Computer files with the graphic design are created using templates provided by printing companies. In Figure 3, the Global Health Disparities CD-ROM label was created using a template for Adobe PageMaker® supplied by the printer. A paper sleeve with window packaging was selected for the CD-ROM because it was the most cost-effective. There are, however, more elaborate packaging such as jewel cases that are available at all printers. The turn-around time for CD-ROM production was two weeks.

CD-ROM Corrections

As anticipated, after the master CD-ROM was sent to the printer, corrections were needed to be made to the CD-ROM. Although anticipated that details would be missed in such a large project, the errors were nevertheless still upsetting. First, the Office of Minority Health, US Department of Health and Human Services (DHHS), was erroneously listed under the US National Institutes of Health (NIH), and apologies had to be made. Second, one organization listed on the CD-ROM had its web address changed, thus, the link provided on the CD-ROM was no longer operational. Third, after the printing process was well underway and too late to stop the press, it was discovered that the "interactive" PDF Evaluation Questionnaire SOPHE members were being asked to complete with their computers, was an older version that was not interactive. SOPHE members would not be able to complete the questionnaire and submit it as an e-mail attachment. Last, an icon associated with the Global Health Disparities CD-ROM drive was overlooked, thus, an icon representing the CD-ROM drive is not displayed.

Labels noting the corrections listed above had to be affixed to all 500 CD-ROM paper sleeves being mailed to the SOPHE 53rd Annual Meeting in Philadelphia, PA, and to the sleeves of the remaining 300 CD-ROMs that were set aside for distribution to California health educators and students. Fortunately, the Project Team planned a three-week buffer period between completion of the CD-ROM printing and the start of the SOPHE meeting.

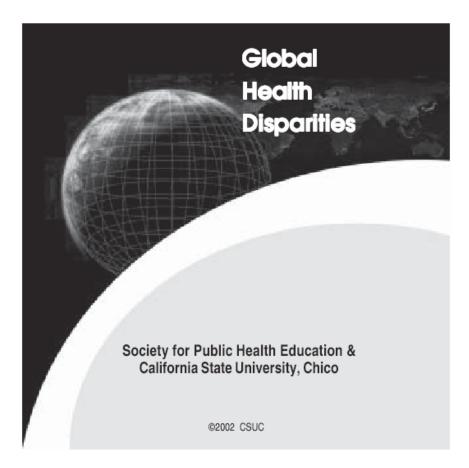


Figure 3
Label of the Global Health Disparities CD-ROM in Adobe PageMaker® using one color.
The printed label looks slightly different from the actual graphic file.

Announcing the CD-ROM

An announcement was made by Chico State to inform the press and public about the Global Health Disparities CD-ROM Project. Also, a poster was designed at Chico State by the staff at the Technology and Learning Program, and were printed in-house by the Presentation Graphics Department. Two copies of the poster were mailed to the SOPHE Meeting. It was decided by the Project Team to print posters that were 3 ft. X 2 ft. in size, using four colors (rather than eight), mounted on foam core (a poster board made out of stiff Styrofoam-like base), and laminated

Graphic design specialists at Chico State, however, advised against mounting posters on foam core prior to shipping because the foam core would be crushed or would break in half in transit. The posters were packed in a poster shipping tube and mailed through an overnight delivery service. When the posters arrived in Philadelphia, they were mounted on foam core at a 24-hour copy service across from the hotel where the meeting was held. See Figure 4 for the CD-ROM poster. Figure 5 is that of Chico State student Jérome Héuzé who created all of the graphic designs. In the picture, Jerome is working on the SOPHE CD-ROM Poster.

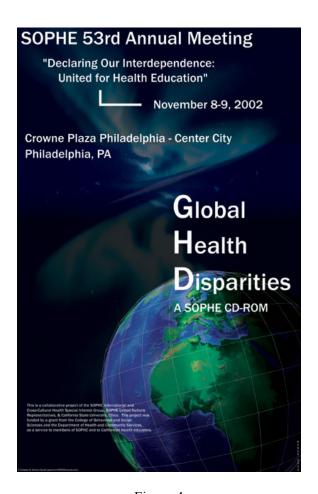


Figure 4
Global Health Disparities CD-ROM Poster for the SOPHE 53rd Annual Meeting. The printed poster looks slightly different from the actual graphic file.



Figure 5 Chico State student Jérôme Héuzé working on the Global Health Disparities CD-ROM Poster

Project Evaluation

The Global Health Disparities CD-ROM and flyer were included in the SOPHE 53rd Annual Meeting registration packets. Registrants were asked to complete the evaluation questionnaire. A total of 500 CD-ROMs were distributed to SOPHE registrants. An e-mail reminder was sent to members four weeks following the meeting. The response rate for the project was less than 5%, and reliable evaluation data cannot be reported here. However, many health educators who received a copy of the CD-ROM reported it was easy to use and useful to their practice. Also, many health educators had Adobe Acrobat Reader®, but did not have the full version of Adobe Acrobat or the most recent version 5.1. Thus, they were not able to use the PDF search engine on the CD-ROM that was created specifically to search full text of all PDF documents. This may be an issue when developing health education CD-ROMs. The most current version of Acrobat Reader can search PDF archives. Stand alone CD-ROM search engines, although costly, can search HTML documents, but not PDF. Most of the documents are in PDF and not HTML.

Also, the other issue that is worth investigating is a better method of evaluating CD-ROM projects such as this because exchange theory is not likely to work. A better method of evaluation may involve hands-on training sessions with national and local professional associations. Those who participate in these sessions would receive the CD-ROMs.

Health Education Professional Implications Advocacy Coalition Building

It is important for professional associations to forge partnerships to build capacity of the public health education workforce and to advocate for vulnerable populations. The Global Health Disparities CD-ROM Project reaffirms the value of such partnerships. Hundreds of health educators now have on their desktops primary resources on health disparities. Had these health educators ventured onto the Internet to forage for the information themselves, it would likely have taken weeks for them to find all of the

information provided to them on the CD-ROM courtesy of SOPHE and Chico State.

Forging new partnerships with old friends help to reaffirm the bonds that hold health promotion advocacy coalitions together, with the goals of influencing health-related policy, social, and cultural changes, while promoting one's own profession. The Advocacy Coalition Framework (ACF) (Sabatier, 1988; Sabatier & Jenkins-Smith, 1999), an actor-based model, addresses the issue of the importance of actors maintaining a long history and record in coalitional activities with one another. Shared beliefs and values of the coalition actors are transformed through their activities into changes in health policy. In the case of the Global Health Disparities CD-ROM Project, shared beliefs and values between actors of the coalition was the "glue" that held the coalition together and provided the basis for completing the project. The goal was not necessarily to influence health policy changes by a governmental agency, rather, the goal was to advocate for populations affected by health disparities through building capacity of the public health education workforce. Not all coalitional activities are necessarily directed toward policy makers in governmental bodies.

Chico State and SOPHE have already begun planning for the second in the health education professional development CD-ROM series, the Mexican-USA Border Health CD-ROM. A Migrant/Farm Worker Health C-ROM may be produced at the same time as the Border Health CD-ROM.

The organizations that were invited to join the coalition for this project are, in alphabetical order: the American Association for Health Education (AAHE), Conference of Non-Governmental Organizations (CONGO), International Union for Health Promotion and Education/ North American Regional Office (IUHPE/NARO) and the Latin American Regional Office (IUHPE/ORLA), the Pan American Health Organization (PAHO), and the World Information Transfer (WIT). Chico State is again the lead organization. The Mexican-USA Border Health CD-ROM is scheduled to be

released at the SOPHE/IUHPE Meeting, June 18, 2003, in Las Cruces, New Mexico.

CD-ROM Development Process

There were some aspects of the CD-ROM development process that could have been done differently. First, we should have used a larger coalition to facilitate contact and cooperation by various governmental bodies and not-for-profit organizations. A larger coalition could have led to a greater number of contacts with groups that had resources to offer the CD-ROM project. In the Border Health CD-ROM project, a much larger coalition will be used to facilitate contact and the granting of permissions to republish materials on the CD-ROM. Second, permission to print a larger number of CD-ROMs should have been stipulated in the contact letter with organizations. It was not anticipated for so many organizations participating in this process to ask for more than one copy of the Global Health Disparities CD--ROM, especially those with an international focus. This problem has been corrected for the Border Health CD-ROM project where in the permissions letter, we are

stipulating that an undetermined number of CD-ROMs will be disseminated to the organizations granting permission to republish their materials, collaborating organizations, and governmental officials and other bodies related to Chico State. These complimentary copies of CD-ROMs are especially important to distribute to health policy makers and the media to raise awareness of the health issue in public. Also, potential grant funding sources may want to see tangible evidence that the project team would be successful in completing future CD-ROM projects.

Chico Statements

The SOPHE and CSU Chico Global Health Disparities CD-ROM Project is the feature article in the March 2003 issue of *Chico Statements*, the glossy magazine of the California State University, Chico. Over one hundred thirty thousand copies of the magazine will be distributed. Copies are on order for distribution to SOPHE members.

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