Commentary

The Future of Health Promotion: Talkin' Technology Blues

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Talking about the future often means talking about technology. Does the future of health promotion lie in technology? This article offers a user's perspective on this issue. By returning to core values in which health education practice is rooted, it raises basic questions we ought to ask as we apply technology to meet the challenges we face.

Talking about the future these days often means talking about technology. *Technology*, according to one dictionary definition, is "a manner of accomplishing a task especially using applied science processes or knowledge" and might be said to include the human genome project, telehealth, internet exchanges, and high-speed communication developments. Many meetings of professional organizations such as the Society for Public Health Education (SOPHE) and the American Public Health Association are geared toward technology. Usually referring to the latest invention or method, technology can endow us with vast capabilities. Technology can also spare one of our most cherished commodities, time. My own work, and new Web site, depend on technology. Whether the future of health promotion really lies in technology, however, deserves closer scrutiny. This article raises questions that deserve our attention as we go on embracing technology in pursuit of our mandate: "health for all" (World Health Organization, 1978).

The basic question is, How will technology affect social inequalities in health? One reason we look to technology is that it promises a link: Computers are everywhere. But although technology may connect

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some of us, it does not necessarily unite all of us. In fact, it may even separate us.

- Two thirds of the people in the world have never made a telephone call.
- One third of the people in the world have no access to clean water.

We embrace the "shrinking world" that technology offers us. How will we also respond to the paradox that technology also stretches the gaps between those with the most access to health and all the privileges it offers and those with the least access?

As John Allegrante (1998) said in his SOPHE presidential address, each one of us came into the field of public health promotion because we thought we could make a difference: a difference in the lives of the poorest, the sickest, the incarcerated, the marginalized, the stigmatized. How will technology narrow or widen social inequalities in health? Might technology remove us further from, rather than bring us closer to, the marginalized? The men, women, and children not just around the world but even in our own country, who stitch the clothes we wear, assemble the toys with which our children play, absorb the chemical toxins as they toil in fields to raise the fruit we eat?

Might taking technology for granted make us stereotype, forget, and devalue those without technology? Does it lead us to think that a child must have a computer or internet access? If they are to thrive, young people need not only enough to eat and warm clothes but also a safe place to be and an engaging relationship with a caring adult. Does technology provide these for children, or the exact opposite? We must ask because if anybody represents the future of health promotion, it is our children.

We embrace technology because it promises to give us a staggering command of information and offers us an international reach. Yet, what seems to make our job easier may make basic health promotion goals harder to achieve. *Critical Public Health* editor Robin Bunton (1998) offers an example.

Last year, in England, privatized water companies introduced electronic metering. The meters are equipped with a so-called smart key and cut off household water supply once usage exceeds a prepaid credit limit. Not long after, local health officials noted with alarm that a number of people—mainly from low-income households—were reduced to carrying buckets of water through the streets. This raised the specter of 19^{th}-century sanitation problems and the spread of infectious disease. Yet, this scare has some unique late 20^{th}-century features. The problem originates in the vastly increased capabilities of science and information technology (Bunton, 1998) and how they are applied without regard to basic public health values and goals. New technologies bring with them—and bring to us as public health educators—serious new challenges. In other words, technology may expand our problems and our questions.

One of our answers may be to remain rooted—as health advocates, workers, educators, researchers, and practitioners—in the fundamental principles of our field, especially community building and community participation (Minkler & Wallerstein, 1997; World Health Organization, 1978, 1986). We give credence to the Declaration of Alma Ata's powerful definition of community participation: "the process by which individuals and families assume responsibility for their own health and welfare and for those of the community, and develop the capacity to contribute to their and the community's development" (World Health Organization, 1978).

No matter how we apply technology to our health promotion practice, are we practicing in a way that starts where the people are? These words, "start where the people are," were first spoken by one of our most beloved founders of health education, Dorothy Nyswander (1956), and ring simple and true. In this light, we are challenged to assess whether computers, and technology, enable us to start where the people are.

Some people may suggest starting where the technology is and using it to change, or control, the people. No. We ought to start where the people are, adhere to fundamental health promotion ethics and goals, and then move toward the changing technology.

My colleagues and I have developed a method called "photovoice." This method involves providing people with cameras so that they can take pictures. They use these pictures to illustrate the stories they have to tell. Photovoice has been an effective way for people to portray, and then communicate to policy makers, their own health and work realities—what they want to remember and what they want to change (Wang & Burris, 1997). Photovoice has proved particularly powerful for Chinese village women, but we are discovering it may be helpful as well for the old, the functionally illiterate, those living in shelters, and those with socially stigmatized health conditions or status. Health educators can use photovoice to get people involved in small and large group discussions with one another about their vision for planned health change. We then amplify those discussions by involving policy makers and community leaders (Wang, Wu, Zhan, & Carovano, 1998).

Now, the camera in itself is a piece of technology. The kinds of cameras we use in photovoice are simple, but their technology is quite elegant. Some people hear about photovoice and they respond immediately, "Cameras! What a great idea. Let's go for it!" Yet, I have been working with photovoice since 1992, and we have never started by teaching people how to use a camera. Instead, the first workshop is a group discussion. We talk about ethics and power. We talk about how cameras can confer authority on the user, and how they also confer responsibility. We discuss the responsibilities one has when one uses a technology, and what it means to introduce a tool, even one as commonplace as a camera, into a neighborhood, a clinic, or a community group. Adapting Mittelmark's (1990) admonition, we devote care to building participants' understanding of the ethical issues that confront the project and all of us involved.

We discuss questions such as "What is an acceptable way to approach someone to take their picture?" Should someone take pictures of other people without their knowledge? We ask participants to give pictures back to the people who have been photographed to show respect, build trust, and develop community (Wang, 1999; Wang & Burris, 1997). This first group discussion grounds us, or roots us, in basic health-promotion principles. The people who participate in photovoice may themselves be pretty down and out, but that does not relieve them from the responsibility of thinking about what it means to use a camera. One may have obtained the required human subjects' approval, but all the blessings in the world from the Institutional Review Board will not absolve me if participating in the project brings harm to someone.

Cameras are the central tool in photovoice, but they are just a tool. In other words, the root of photovoice is not the use of cameras. The root of photovoice is an attempt to effectively use basic health promotion ethics, and concepts such as community participation and community building, to carry out our good intentions.

As one final comment on technology, a story arises. Recently, we did a photovoice project, described in this issue of *Health Promotion Practice*, involving women and men at our homeless shelter in Ann Arbor. One of the people who participated in our project was a 40-year-old man named Mark. As part of our project, he took a photograph of another man staying at the shelter. Here is Mark's account of what followed:

> The day after I took this man's picture, this man hit me in the face with a metal chair. My left orbit/eye socket has multiple fractures and an abraded cornea. In 2 days, I will have a metal plate and pins put in the eye socket. Plastic surgery will then be done. I have never said or done anything to this man. This is the first time in my life I have been the victim of a fag bashing.

There are many layers to this story. The layer emphasized here asks you to imagine how I would have felt, or you would have felt, about a man getting hit in the face with a metal chair, perhaps even blinded, because he had taken someone's photograph as part of a health-promotion project you were running. Fortunately, that is not what happened. Mark was not blinded. As it turned out, the man who had hit him was suffering from a mental disorder and did not even know Mark had taken his photograph the day before.

The use of technology can provide no protection against the possibilities of harm that are present in daily human interaction. Had the man attacked Mark because Mark had taken his picture, I would have felt responsible for that life-threatening injury to Mark—not only felt responsible but been responsible. We take responsibility for what we know can happen and not merely for good intentions.

In 1980, Lawrence Green, Marshall Kreuter, Sigrid Deeds, and Kay Partridge presciently described the "technology trap" when they warned against health education practice "based on a series of fallacies the sum of which suggests that the answer to effective health education lies entirely in the quality and quantity of advanced educational technology." In turn, the key to the use of other technological approaches, such as computers in promoting health, is not merely how they are applied but whether we are using basic health promotion values.

This article does not discuss the stupendous contributions that technology offers us in the practice of health promotion. Dozens of articles in our journals and presentations in our annual meetings rightly are devoted to these innovations. Strecher et al. (1994), for instance, provide evidence that computer-tailored information effectively contributes to smoking cessation. Paperny (1997) evaluates the promise of computerized health assessment for adolescent sexual health in health care settings and schools. Cart (1997) offers a thoughtful framework and critical questions about the contributions of online computer networks for community organizing. Eng et al. (1998) consider the benefits and barriers to universal technology access for health information.

It is not so simple as "Rich people with technology are bad, whereas poor people with technology are good, and poor people without technology are exploited." It is more complex than that. Just because technology can do good, and we are drawn to it and enabled by its wonders, does not mean we are excused from thinking about (a) its implications, whether these involve discrimination arising from the misuse of data from computerized health-risk appraisals or automated shut off of clean water through electronic water meter monitoring; (b) its contribution to widening social inequalities in health; and (c) its ability to remove us from the majority of the world's health and work realities and concerns.

Maybe there should be no paradox here. The word *technology* comes from the Greek word *techne*, which is usually translated "art, craft." And both ought to live at the root of our practice. Both are necessary to express caring, a caring one may find at the heart of each person in our field. Michael Ignatieff (1984) put it well: "We need words to keep us human." Therefore, let us excavate the root of one more word, *root*, because the word *radical* comes from that Latin word for *root*.

The core values of our field—to care, to use both our art and our craft, to be creative, to be persistent, to create community—these values are radical ones in any era. The godparent to health educators everywhere, Dorothy Nyswander, as well as Lucy Morgan and Ruth Grout—and the mighty oaks who, with Dorothy, left our earthly world last year, Hod Ogden, Mabel Rugen, and Bill Griffiths—leave us with basic questions, questions such as "Are we going to apply technology and then move toward the people, or are we going to start where the people are and then move toward technology?" "How are we going to apply technology to eliminate (Satcher, 1998), not widen, social inequalities in health and access?" "How will we apply, and create a context for, the tool of technology to communicate the values at the root of our practice?" Our future within health promotion, and the character of our field, come back to the radical values passed on from people such as Dorothy, Lucy, Ruth, Hod, Mabel, and Bill. These radical values are at the root of our practice.

REFERENCES

Allegrante, J. P. (1998). SOPHE—*At the intersection of education, policy, science, and technology*. 1998 SOPHE presidential address, Washington, DC.

Bunton, R. (1998). Critical public health: An introduction. *Critical Public Health*, *8*(1), 3-8.

Cart, C. U. (1997). Online computer networks: Potential and challenges for community organizing and community building now and in the future. In M. Minkler (Ed.), *Community organizing and community building for health* (pp. 325-338). New Brunswick, NJ: Rutgers University Press.

Eng, T. R., Maxfield, A., Patrick, K., Deering, M. J., Ratzan, S. C., & Gustafson, D. H. (1998). Access to health information and support: A public highway or a private road? *JAMA*, *280*(15), 1371-1375.

Green, L. W., Kreuter, M. W., Deeds, S. G., & Partridge, K. B. (1980). *Health education planning: A diagnostic approach*. Palo Alto, CA: Mayfield.

Ignatieff, M. (1984). *The needs of strangers*. New York: Penguin.

Minkler, M., & Wallerstein, N. (1997). Improving health through community organizing and community building. In M. Minkler (Ed.), *Community organizing and community building for health* (pp. 325-338). New Brunswick, NJ: Rutgers University Press, 1997, (pp. 198-210).

Mittelmark, M. B. (1990). Balancing the requirements of research and the needs of communities. In N. Bracht & L. Kingsbury (Eds.), *Health promotion at the community level* (pp. 125-139). Newbury Park, CA: Sage.

Nyswander, D. (1956). Education for health: Some principles and their application. *Health Education Monographs*, *14*, 65-70.

Paperny, D.M.N. (1997). Computerized health assessment and education for adolescent HIV and STD prevention in health care settings and schools. *Health Education and Behavior*, *24*(1), 54-70.

Satcher, D. (1998). *Plenary address*. Presented at the American Public Health Association Annual Meeting, Washington, DC.

Strecher, V. J., Kreuter, M., Den Boer, D., Kobrin, S., Hospers, H. J., & Skinner, C. S. (1994). The effects of computer-tailored smoking cessation messages in family practice settings. *Journal of Family Practice*, *39*(3), 262-265.

Wang, C. C. (1999). Photovoice: A participatory action research strategy applied to women's health. *Journal of Women's Health*, *8*(2), 185-192.

Wang, C., & Burris, M. (1997). Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education and Behavior*, *24*(3), 369-387.

Wang, C. C., Wu, K. Y., Zhan, W. T., & Carovano, K. (1998). Photovoice as a participatory health promotion strategy. *Health Promotion International*, *13*(1), 75-86.

World Health Organization. (1978). *Declaration of Alma Ata*. Copenhagen, Denmark: Author.

World Health Organization. (1986). *Ottawa Charter for Health Promotion*. Copenhagen, Denmark: Author.

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