Continuing Education
AAHE Scholar Address

A New Health Education Paradigm: Uncommon Thoughts about Common Matters

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> "Disobedience, in the eyes of anyone who has read history, is man's original virtue. It is through disobedience that progress has been made." –Oscar Wilde, 1881

Since being notified of this award, I have experienced a glimpse of what it's like to be well-known or, as one might say, "famous." There has been constant pounding on my door, banging on the windows, clawing at the doorknob, and blood-curdling screams. This constant pounding, clawing, and screaming has come at all hours of the day and night; it became so severe that last night, I simply could not take it anymore…so I got up and let them out.

Seriously, before initiating my address, I wish to briefly and chronologically acknowledge unique individuals who are responsible for the path my life has taken, and for their contributions to my receiving the AAHE (American Association for Health Education) Scholar Award. First, my greatest overall influence was the local south Texas neighborhood grocer who happened to take a liking to me. He built me a shoebox and taught me at age six to walk the streets to earn money. That is when I first realized that work was associated with positive outcomes and that hard work transformed dreams into reality. He actually "connected the dots" for me to realize that work, resolve, dreams, rewards, the future, and possibly accolades were interconnected at a higher level.

Born the first child of a large, lower-middle-class racially mixed dysfunctional family, there was never adequate or quality parenting; so, throughout my public school years, I consciously selected teachers as surrogate parents. As I progressed through school, I would replace substitute parents by simply selecting new ones. Many wonderful teachers throughout my public school days came to my emotional rescue. They revealed to me the possibilities the world had to offer and gave me the most precious gift of all—hope. They made it clear that the road to success was paved with commitment and passion, so if I were willing to work hard, that one day I could move out of the neighborhood. These dedicated teachers unknowingly saved me from a life of crime, violence, substance abuse, and possibly early mortality.

My greatest professional influence was Donald Merki, a not-so-well-known Texas Woman's University professor. He encouraged individuality and one's ability to view life from different perspectives. He suggested that life was an ongoing exploration, very fluid and always changing, and that to be successful I needed to change with it. He was a great teacher, but true to his own aspirations, he suddenly traded a secure university position for a job as a tennis pro in Santa Fe.

My research accomplishments can be traced directly to Gerald Landwer, my departmental chair and an exercise physiologist at Texas Christian University, an academic maverick who never felt threatened by being the lone dissenting academic voice. Possessing a strong sense of justice, he always sided with the truth. He taught me the value of research and that the future for both the individual and health education lay in one's ability to produce quality research.

As a researcher, I had dreamed of this moment—delivering an AAHE Scholar address before one's peers at the national convention—a dream come true. Although I set my sights on the scholar award early in my career, I had come to believe it would never

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transpire, for I violated most rules that allow acceptance within the mainstream of health education. I was a health educator researcher working in a medical setting, directing an addiction and psychiatric medicine research center, functioning at a level of research not typically found among health educators, and publishing my work outside the health education mainstream. Moreover, the lessons I learned about thinking, working, integrity, reality, honesty, and living outside the conventional norm from two nontraditional, free-thinking, nonconformist professors (Drs Merki and Landwer) were not the mainstream health education approach.

I also wish to thank many individuals in the audience, for you unknowingly have contributed to my success. I borrowed from you and made it my own by simply taking it to another level or direction. I do wish to single out Molly Laflin and Terri Manning, both former students of mine, who taught me the value of friendship. Everyone needs someone who can affirm the direction one is exploring or that the professional position one is taking is not too far outside the mainstream. Luckily I had two special individuals, Molly and Terri, probably because they themselves are not mainstream thinkers and are willing to think in alternative ways.

Thanks to David (Randy) Black, Mohammad Torabi, Chudley Werch, and Robert McDermott, whose equals rarely pass our way—they are beacons of light from whom we can all learn. Randy Black is highly ethical; in fact, his integrity can be an obstacle, because he often shortchanges himself by taking the high ground when a lesser position would be more beneficial. However, the world is a better place because of him. Mohammad Torabi is truly a considerate person; he can disagree with you and make you feel good about it. He is a gentle soul who never has a negative comment about colleagues. Actually, it was he who nominated me for this award. Thank you, Mohammad. Chudley Werch's word is his bond; when he says he will do something, he does it. His gift lies in his ability to focus on a project and to follow it to completion; he is extremely successful because of this wonderful trait. I am profoundly impressed with Robert McDermott, a true scholar. He is a surgeon with words, who always finds the precise word to elucidate his point. He can create thunder with a feather; he can breathe life into a boring paragraph better than anyone I know. For centuries seamen have used the North Star to keep from becoming lost. I am suggesting the profession would be well served if Randy Black, Mohammad Torabi, Chudley Werch, and Robert McDermott were used as our North Stars.

When one seeks the advice of others, one is usually seeking an accomplice, so in addition to the individuals previously mentioned, I wish to thank my partners in crime, who in the formative stages of this address provided valuable direction, insight, and thoughtful comments: Patty K. Bible; David (Randy) Black; Penny N. Glover; Mark J. Kittleson; Molly T. Laflin; Terri M. Manning; Robert J. McDermott; Dennis L. Thombs; Robert F. Valois; Robert M. Weiler; and Michael Young. These individuals proofed various versions of this address, so that I would not venture too far from the mainstream, and all contributed immensely to the address; however, a special thanks to Drs Weiler and Valois, who offered excellent food for thought.

I wish to also acknowledge my current chairperson in behavioral medicine and psychiatry at West Virginia University School of Medicine, James M. Stevenson, MD, who has sensed my need for freedom and allowed me to work with minimal supervision, realizing the greater the freedom, the more productive I become.

Finally, no reflection of my life or address is complete without acknowledging Penny N. Glover, my wife; for I wish everyone could have a spouse who is one's best critic, lover, colleague, and friend. With simply a glance we can exchange a thousand words. To use a worn-out cliché, she is truly my soul mate. Simply put, she was placed on this earth to rescue me. She may not always agree with me, but she will always acquaint with me the truth, provide her full support, and love me unconditionally—what more could one ask? To Penny and all the great talents I have mentioned, thank you for making my life richer, for I am a better person for having known you.

This award has allowed me the opportunity to deliver an address with no restrictions. Speaking about tobacco research would be secure and undemanding; however, danger can be exhilarating. Consequently, my pathological need to always progress leads me not only to create a moment of personal reality, but also to open a window to the challenges and future of health education.

WHAT HAVE WE BEEN DOING?

On the flight home from the 2003 AAHE meeting in Philadelphia, I sat next to David Birch, currently chair of the Department of Health Education and Recreation, Southern Illinois University at Carbondale. During our conversation he relayed an interesting exchange he had with Jack Osman at the conference. Subsequently, I contacted Jack (Interview Jack Osman, June 13, 2003), who shared a 34-year-old story and approved my sharing the story with you. At the 1970 national convention, Delbert Oberteuffer delivered a speech on the future and challenges of health education. He received a standing ovation, left the podium, and before exiting, turned around, walked back to the podium, thanked everyone for their warm response, and stated, "You know, I gave this same exact speech almost 20 years ago—what have we been doing?"

As I prepared for this address, I perused many published papers discussing the future of health education and came to the conclusion that we, as health educators, are impressive thinkers who in the past have offered grand direction for the future of health education. However, it does not appear that we always take action on these ideas, hence Oberteuffer's comment. Or, if we do act on our ideas, it occurs incrementally, which is always more appetizing than rapid change. This suggests that we are excellent at strategic planning but lack in tactical

planning, the difference being that the former requires thinking, whereas the latter requires resolve. I learned early from my childhood grocer who built my shoeshine box that any idea is like a wheelbarrow—you have to push it for it to go anywhere. Merely writing and chatting about the future of health education are inadequate. Throughout the address it may appear that I am repeating myself; however, I am attempting to adhere to the old tried-and-tested adage of tell them what you're going to tell them, tell them, and then tell them what you told them.

THERE IS A CHANGE IN THE AIR

My nature is not to shy away from a problem but to attack it squarely at the heart; therefore, I wish to seize Oberteuffer's comment, thrust McDermott's 2000 scholar address (McDermott, 2000) to the next level, and draw on portions of a personal interview published in the *American Journal of Health Behavior* (Laflin & Black, 2003) to not merely push ideas incrementally but to propel them before you so that we have to confront the obvious—health education needs more quality research if health education is to survive the future. McDermott's (2000) scholar address refers to the research change needed in health education as a revolution; however, if revolution does not sit well, try rebellion, revolt, uprising, upheaval, insurgency, insurrection, mutiny, or riot, all of which enjoy a strong sense of emotion coupled with an urgency—in this case, an urgency to change how doctoral-granting programs train health education researchers. Kotter (2002) notes in *The Heart of Change,* "Without enough urgency, large-scale change can become an exercise in pushing a gigantic boulder up a very tall mountain."

> *Change is the law of life and those, who look only to the past or the present are certain to miss the future.* –Irving Janus

Robert Gold (Black & Laflin, 2003) in a recent interview stated that he is a fan of chaos, probably because he is fully aware that chaos breeds change and growth, whereas order breeds habit and routine. Thus, most people are naturally fearful of change, and when backed into a corner, most people will fight their way out. Change in and of itself is a doubled-edged sword (Fullan, 2001) for it evokes fear, loss, danger, and panic on one side and exhilaration, excitement, improvement, and energy on the other. Challenging one's thinking can create anxiety; however, one can lower anxiety by changing perceptions, because perceptions are everything (Mapes, 2003). Moreover, self-perception theory argues that when a speaker pushes too hard or fast, it causes the audience to mentally argue against the speaker; therefore, the speaker has the opposite intended effect—the audience becomes more entrenched, and unfortunately, the change agent becomes the protagonist (Miller & Rollnick, 2002). The theory also argues not to push before the audience is ready. However, it's been 54 years since Oberteuffer delivered the initial address and 34 years since his 1970 comment. Delay and endurance are usually a form of indecision—can we wait any longer? Permit me for the remainder of the time to transport some of us out of our comfort zones and explore a new research model. I hope you accompany me as a willing participant and allow yourself to be delicately pulled into an undercurrent of a new paradigm. However, before proceeding, I wish to share the first of my disclaimers: This address does not purport to speak for the profession, the ideas expressed herein are mine and only mine; second, my comments are directed primarily to those doctoral-level academic professionals who have not fully accepted their academic responsibility of research; and third, to doctoral training programs producing our future leaders in health education.

> *Life is about moving; it's about change. And when things stop moving they are dead.* – Twyla Tharp, dancer and choreographer

Breakthroughs in thinking and change can occur simply by giving validity to a new idea (Mapes, 2003). The mere act of admitting there is a crisis and the possibility that a solution is necessary often can set change in motion. So, as you listen, pretend for the moment that everything is true. You don't have to believe everything for the rest of your life; just pretend it might be true for today.

THE TYPICAL HEALTH EDUCATOR TODAY

It is difficult to merge all health educators into a mold; however, I can firmly and confidently state that health education has more brilliant teachers than any other profession. As implied by our name, we educate and, as a general rule, teach about the research of others. For the most part we tend to disseminate rather than create knowledge. We focus primarily on facts. Most of our curricula, books, and literature are informational, with only modest quantities of theory or guidelines for conducting or interpreting quality research.

Our generic training encourages health educators to have knowledge that spans a mile wide and an inch deep. Many mistake this shallow knowledge as having broad interest with accompanying expertise; however, the quandary is in the depth of our knowledge, or in this case, expertise. Van Doren (1991) notes that the term "renaissance man" suggests a person, either man or woman, of many accomplishments, and the term is ironic because knowledge has become so complex that no human mind is capable of grasping it all, or even a large part of it. However, this notion of experts is the direct result of health education being committed to our own literature and our own kind (McDermott, 2000). Expertise requires a depth that does not come quickly; it comes with time, and time can only be circumvented with intensity. It is rare for health educators to develop an expertise supported by a line of corresponding research, much less expertise in several areas. No one achieves greatness by becoming a generalist (Maxwell, 2003).

Health educators in academia tend to place great value on teaching and, to a lesser extent, professional service; unfortunately, as a profession, our lack of research produc-

tivity may be contributing to a loss of health education programs throughout the country. Research should not come at the expense of teaching or service, but should be valued as an equal partner.

It is extremely easy to say "no" to a new idea, because new ideas cause change, new ideas create uncertainty, and we feel more comfortable doing it the way we've always done it before. Everyone seems to be resistant to the new update of a software program, but once we get beyond the learning curve, the change usually improves productivity. Unquestioning adherence to solely a teaching paradigm limits our ability to recognize shifting trends; therefore, we tend to forget that there can be more than one answer. If we do not understand this we will be blinded to other options. Psychologists recognized this in the middle of the last century when psychology was not fully considered a science until it turned its attention to research; today, no one questions psychology's affiliation to science.

THE NEED FOR A NEW HEALTH EDUCATION PARADIGM

McDermott (2000) has provided the profession the most comprehensive strategic plan regarding the condition of health education research today. Though only 4 years have passed since McDermott's address, I hope to capture his overall tone and provide another layer to his paradigm. However, allow me to provide my operational definition of the word *paradigm*. A paradigm is a set of rules and regulations (written or unwritten) that does two things: (1) it establishes and defines boundaries, and (2) it tells us how to behave inside the boundaries to be successful (Barker, 1992). Moreover, synonyms for *paradigm* are *model, theory, dogma, worldview, mindset, tradition*, and *habit*.

The brief history of health education has been extremely successful, but as universities move toward accountability, departments are being scrutinized ever more closely. I wholeheartedly agree with Torabi (2001), who in his scholar address noted that "despite our growth and progress as a profession, health education still struggles to receive the respect and recognition that other comparable applied fields enjoy." I believe this lack of acceptance is due to our inability to produce quality research as a profession.

The roots make the fruits; therefore, because science and discovery were not demanded of those who preceded us, they exemplified excellent teaching and brilliant service. The foundation they built placed teaching as the central principle of health education. Moreover, these pioneers belonged to a time in health education's infant history where credibility, visibility, and growth were paramount; therefore, they were promoters of health education, not necessarily researchers. The primary skill to succeed in that paradigm was teaching. The extraordinary leaders who preceded us have situated us in an ideal position for our quantum leap into the future. We possess a solid base in teaching and service; now, like psychology before us, we must aggressively leap to the next level, remembering always that a quantum leap no matter how small always breaks with the past and forges new ground (Mapes, 2003).

From this wonderful foundation laid by those who preceded us, we quite naturally assumed that what was successful in the past, in this case teaching, would naturally guarantee success in the future. We can all name many wonderful university teachers who were promoted with tenure 15–20 years ago without research publications. Given today's standards, it is doubtful whether some of our pioneers would be able to hold an academic position, especially at a research 1 institution. These individuals would never be promoted or tenured in today's more science-driven climate. As universities raise standards, we also need to embrace a new model that includes research as an equal partner with teaching. The current insufficiency in research capacity underscores the need for clearly articulated doctoral training in research (Association of Schools of Public Health, 1999; Thombs et al., 2004). The Carnegie Foundation for the Advancement of Teaching (2003) clearly states that those who hold a doctoral degree are stewards of the profession, and at its heart the doctoral degree is a research degree. Research not only needs to be reflected within academic programs, but also must be modeled in persons possessing the doctoral degree.

Become the change you want in the world. –Ghandi

When a paradigm shift occurs, everyone goes back to zero, meaning that what was valued in the previous paradigm is not necessarily valued in the new paradigm. As with all paradigm shifts there is an accompanying fresh set of rules that must be internalized. Paradigm shifts with which we may be familiar include shoulder-length hair becoming an acceptable norm for men, the uncloseting of gays, terrorism as an all-too-frequent daily event, and because of shrinking borders with outsourcing, you can now call your favorite mail order catalogue and be speaking to someone in India and not Dallas as you thought. I often wonder how I functioned without overnight mail, computers, cell phones, the Internet, and faxes. Actually, as persons learn to use PDFs (portable document format) correctly, faxes will quickly become a thing of the past.

Did you know digital cameras now outsell film cameras? Dan Rather on the *CBS Evening News* (*CBS Evening News with Dan Rather*, January 22, 2004) recently announced that Kodak was "going digital," and Kodak was laying off one quarter (15,000) of its workforce from its film division. Moreover, on Monday, March 8, 2004, the *Wall Street Journal* (Bandler, 2004) reported that Kodak's film sales in the developed world tumbled, hurt by the faster-than-expected embrace of the digital technology. Earnings plunged 64% in the third quarter and 83% in the fourth quarter of 2003. I anticipated this paradigm shift 2 years ago, when glancing out a sixth-story window with a panoramic view of Pittsburgh. Within blocks of each other, two camera shops were going out of business. Clearly, I remember concluding that it must be the new digital paradigm; for I had just purchased my second digital camera and knew

I would never return to a film camera.

To anticipate the future, more doctoral-trained health educators should embrace the research paradigm to better help those we endeavor to serve and, therefore, move to the next level. To those who are deeply rooted in teaching or view their mission in a narrow paradigm by wishing to help people through only teaching, counseling, service, and good intentions, you are evidence that we need better research training in our field. The world is constantly changing and experiencing paradigm shifts in all aspects of business, industry, medicine, and academia, including health education.

EXPLORING AND CONFRONTING THE FUTURE

Barker (1992) best illustrates the importance of learning to explore the future in an astonishing narrative on Swiss watch making. Allow me to paraphrase. For decades Switzerland had dominated the world of watch making; and why not, they invented the minute and the second hands. They continually improved gears, bearings, and springs and were on the cutting edge in waterproofing and self-winding technology. For decades if you wanted an accurate, reliable watch, it had to be Swiss. The Swiss constantly worked on making better watches. In 1968 they had 65% of the sales in the world market and between 80–90% of the world's profits. Yet in 1980 their world sales collapsed from 65% to less than 10%, and the profits plummeted from 80–90% to less than 20%. What happened? Simple: they ran into a paradigm shift—a change in the fundamental rules of watch making. Mechanical mechanisms were giving way to electronics. In 10 years the Swiss watch making method that was so dominant, so secure, so profitable was destroyed, for 50,000 of the 62,000 watchmakers lost their jobs; it was a catastrophe. Everything the Swiss were good at suddenly was irrelevant in the new electronic paradigm. However, for Japan, it was the opportunity of a lifetime, for they were in the midst of developing world-class electronic technology such as the electronic quartz watch, led by Seiko. The irony was that the Swiss themselves were inventors of the electronic quartz movement. Sadly, when the idea was presented by Swiss scientists to the Swiss manufacturers, they rejected the idea; after all, electronic quartz movements didn't have a mainspring and bearings, required no gears, and were battery powered. This unfortunate situation could have been avoided if the Swiss had learned about their own future and anticipated the electronic paradigm shift.

Health education can avoid a similar fate by improving our ability to anticipate the future. If we can better anticipate the future, there is no need to fear it; we can welcome it, embrace it, and prepare for it, because it is in the future where our greatest leverage lies. It is in the future where we have time to prepare today. We must learn to think of the future because this is where we are going to spend the rest of our lives. Remember, it wasn't raining when Noah built his ark.

I learned at an early age that when the future was not going my way I should seize it and take control of it, for if I didn't, someone else would. Briefly allow me to share three recent professional, dramatic, personal examples of how I took control of select portions of my future. First, nearly two decades ago when one of my manuscripts was rejected for insignificant results, I decided to create my own journal, the *Journal of Insignificant Results*. Instead, I purchased from Slack Inc. *Health Values* and what has come to be known as the *American Journal of Health Behavior*. The primary purpose of this acquisition was to provide manuscripts with insignificant results an equal chance at publication, because at that time there was a bias toward publishing only significant results. In this new journal no manuscript would be rejected for insignificant results; the determining factor would be good science and the rigor in which the data were collected. Thomas Edison in his quest to find the correct filament for the electric light bulb said it best, "I have not failed, I have found 10,000 ways that won't work."

A second scenario for seizing control of my future evolved when the profession would not listen to my appeals for improving the quality of research. So in 1997, along with 33 brave individuals, we founded the American Academy of Health Behavior. The Academy's focus is on supporting meaningful health education research and preparing a new generation of health education researchers. This organization ensures that health education research is the driving force of health education professional meetings, that training of health education researchers is highlighted, and that researchers have a sense of community among other researchers. To ensure that the Academy membership would attract primarily researchers, a membership criterion requires applicants to possess a minimum of 10 data-based publications; moreover, the Academy is based on meritocracy and not politics. The Academy's membership includes most of the best researchers in health behavior, health promotion, and health education today. As of today, 2004, the past eight AAHE Scholars and the newly named 2005 Alliance Scholar are members of the Academy.

Third, I enjoy collaborating with compulsive, high-energy, meticulous, responsible, dependable, open persons; therefore, I used my grant skills to develop my own research centers at several universities. This operational style has allowed me to work and interact on a daily basis with whom I choose. These examples are not intended to emphasize my successes but to illustrate that we can creatively take control of our future. If the future is not going our way, take action; why not acquire a journal, form an organization, or spawn a fun, creative workplace? The best way to predict the future is to create it (Black & Laflin, 2003).

> *Dogma does not mean the absence of thought, but the end of thought.* –Gilbert Keith Chesterton, 1874–1936

OBSTACLES TO PREPARING FOR THE FUTURE

Because of professional conditioning we tend to interpret health education in traditional ways sanctioned by the health edu-

cation community. There is a distinct paradigm that allows health educators to function within the profession. A rigid devotion to solely a teaching paradigm influences how we treat outsiders, the mavericks, new employees, and researchers. Many are viewed as troublesome, for they test our assumptions or mental models. We are seldom allowed to venture into the fringe, because we are forced into limits and are not allowed to go beyond these confines. Some are adamant about drawing lines in the sand and saying everything outside this boundary is not health education; however, reality is that health education is being practiced by many outside our field. If we don't seize health education and carry it into the future, psychology, sociology, medicine, nursing, or others surely will.

Keep changing. When you're through changing you're through. –Bruce Barton, advertising executive

We fall into habits and patterns, and when the likes of Oberteuffer and McDermott offer us grand insight into the future, seldom do we go beyond acknowledgment or chatter. However, it is at the fringe that all possibilities are achievable. Incredible things happen when we are open to the future and all its possibilities; it takes us to the edge and allows us to soar (Laflin & Black, 2003). Health education needs to find that edge and not fear it but walk it.

Moderation is the last refuge for the unimaginative. –Oscar Wilde, 1854–1900

Health education is a relatively new profession; however, we should be disturbed by the fact that almost all the theory used in our field comes from outside health education. Because of our infancy it may be partially understandable that we have not developed our own theories, because theories evolve from research in which we view things and test them through multiple research projects over time. However, why not extend the current theories to another level within the specificity of a health education intervention? We produce primarily modest quality research that seldom goes beyond defining the problem (McDermott, 2000).

Every adversity carries with it the seed of an equivalent or greater benefit. –Napoleon Hill, author *Think and Grow Rich*

At this moment in the address many doctoral beneficiaries who do not perceive themselves as researchers or are not employed in a research 1 setting may feel as though my comments do not apply to them; however, my comments concern us all. If we can change the way we individually think, we can alter our strategic thinking and, in time, change the way we behave as a profession. People are motivated to change when it becomes apparent to them that change is consistent with their most deeply held values. Let's not wait until it is too late like the Swiss and ignore the obvious. We need to respond to the research challenge like psychology before us and turn our attention to research. According to Miller and Rollnick (2002) suffering is neither necessary nor sufficient to guarantee change. Pain is inevitable, but suffering is optional (Bloomfield & McWilliams, 2001). Moreover, the words *research* or *scientific method* alone are sufficient to create consternation and pain in some individuals. If you have an inquiring mind and enjoy discovery, then you have the potential to be a researcher. In an effort to demystify the process, let's briefly revisit the scientific method of yesterday and today and explore our future.

Creative ideas come to the intuitive person who can face up to the insecurity of looking beyond the obvious. –Morton Hunt, author

THE SCIENTIFIC METHOD: YESTERDAY, TODAY, AND THE FUTURE

The Scientific Method: Yesterday

Of all knowledge the West has given the world the invention of the scientific method is probably its greatest contribution. The method did not simply emerge but evolved during a 150-year span, from 1550 to 1700 (Van Doren, 1991). Science developed as a human activity that was characterized by three straightforward systems of belief.

First, science was practiced by persons with a specific view of the world. Scientists had to be objective, unsentimental, and unemotional. In the strictest sense, science and art had nothing in common. Scientists did not let their feelings get in the way of their observations. Second, science dealt almost exclusively with things, not ideas or feelings. Science worked with external states and their workings, not internal states and their workings. Third, science employed a special method and language to report its observations (Van Doren, 1991).

As long as you are green, you're growing; as soon as you're ripe you start to rot. – Ray Kroc, founder of McDonald's

The Scientific Method: Today

Science evolved from being a special knowledge possessed by a limited number of people to being attainable by anyone who is willing to immerse him- or herself in the process. The evolution of acceptable science has broadened beyond laboratories and experimental designs. Today, excellent science and research are conducted by many health educators outside experimental conditions and the laboratory to include research in communities, housing projects, neighborhoods, clinics, hospitals, worksites, and all types of schools (public, private, alternative). However, we must raise the bar on quality research to the next level, which allows us to publish in high-impact journals. Likewise, we have expanded the dimension of the traditional quantitative research model to include qualitative research. Moreover, intervention studies have successfully changed behavior over short periods of time; however, there remains a pressing need for multilevel interventions to demonstrate maintenance of long-term behavior change and its relationship to reductions in morbidity and mortality (Institute of Medicine, 2001; Thombs et al., 2004).

If you are stuck in your ego, you lose your creativity. –Anonymous

The Scientific Method: Future

Ignorance is the fuel on which science runs: it is in this way that knowledge grows and expands. Scientists are motivated by ignorance, for they wish to uncover truth, not disseminate knowledge. Previous discoveries only fuel their insatiable appetite for more discoveries.

It is the truth we ourselves speak rather than the treatment we receive that heals us. –O. H. Mower

The future health educator, say in 2030, will be substantially different from the health educator today. This change is being triggered not only by universities raising standards for promotion and tenure, but also by the dawning of the most astonishing moment in history, the mapping of the human genome. Health educators will not only be cataloging old facts, but also uncovering and searching for new mysteries. The human genome will revolutionize all academic disciplines. Health educators do not possess, nor should they, the skills to function at this minuscule level; but in the future, health educators will need greater academic emphasis on biology, chemistry, neurochemistry, biochemistry, and even psychoneuroimmunology to be able to converse equally with both individuals (as a health education practitioner) and scientists (as a health education researcher). Moreover, greater emphasis on acquiring quality research skills for our doctoral graduates is paramount.

Everybody wants to be somebody; nobody wants to grow. –Johann Wolfgang von Goethe, 1749–1834

COULD THE GENOME HOLD THE FUTURE OF HEALTH EDUCATION?

For the first time in history, humans possess a recipe to build and run a human body (Van Doren, 1991). We can pinpoint disease, stress, personality, gender, and memory in the genome.

Having spent the past two decades exploring treatments for nicotine dependence and being partially responsible for the Food and Drug Administration's approval of the nicotine gum, the nicotine patch, nicotine nasal spray, the nicotine oral inhaler, and Zyban®, I will temporarily renege on my promise not to discuss my tobacco research. Allow me to briefly draw on a tobacco illustration of how a health educator might need to understand how genes may impact nicotine addiction in the future.

We know that nicotine stimulates the production of dopamine levels in the brain. Moreover, we know that elevated dopamine levels in the brain are associated with a variety of functions, one being the reinforcement of drug abuse (Glover, Glover, & Payne, 2003). Basically, addicts become accustomed to high levels of dopamine in the brain, therefore, continue to use tobacco to reinforce the addiction (Ridley, 1999). At Yale University, researchers have addicted mice to nicotine. These mice repeatedly self-administer nicotine to the extent that, when given a choice, they will select nicotine over food. However, being armed with the genome knowledge of where nicotine is metabolized, in a relatively simple genetic engineering procedure, these Yale researchers can alter the ability of mice to metabolize nicotine, whereby mice no longer find nicotine rewarding or pleasurable. After the procedure, mice once again select food over nicotine. We can hypothesize that in the future the same technology will be used for nicotine addiction in humans, so forget about the nicotine patch, nicotine gum, nicotine nasal spray, nicotine oral inhaler, or Zyban; instead, let's visit the local genetic engineer. What if you are lactose intolerant or diabetic? Similar genetic engineering technology is available for these and other health problems. In the future many of the health problems will be controlled through genetic engineering; however, it is believed that behavior problems present a unique situation, in that not all behavior is capable of being controlled by the genome. Nonetheless, it is clearly becoming evident that behavior, too, lies in our genes (Ridley, 1999).

Only the dead fish swim downstream and the game fish swim upstream. –Anonymous

Thus, in the future, behavior will play an even greater role for health educators, for we also know that unhappy people have more episodes of cold sores; that there are more outbreaks of genital herpes and mononucleosis with anxious personalities; that immune systems weaken with stress, which contributes to more colds (Ridley, 1999); and that an increase in cortisol concentrations contribute to both infection and coronary artery disease (Becker, Breedlove, & Crews, 1992). Some believe that the status of one's job is more able to predict the likelihood of heart attack than obesity, smoking, or high blood pressure (Marmot et al., 1991). However, this disease paradigm literally undermines everything we have learned about today's heart disease paradigm. It appears that heart disease is more at the mercy of our job satisfaction or pay grade than previously believed. It further appears that persons with less control over their lives have greater health problems in general because of rising cortisol levels (Ridley, 1999).

It is easier to resist at the beginning than at the end. –Leonardo da Vinci, 1452–1519

Far from behavior being at the mercy of our biology, our biology is often at the mercy of our behavior. The mind drives the body, which in turn drives the genome. It appears that the psychological precedes the physical (Ridley, 1999). If you cut into the body, blood pours forth; however, if you cut into the brain, emotions such as love, hate, happiness, sadness, and anger do not pour forth. The brain is different from all other organs, for in addition to emotions, attitudes, beliefs, self-efficacy, and locus of control cannot be collected in a test tube and cannot be weighed or measured. All thoughts and emotions are the result of complex electrochemical interactions within and between nerve cells. These neurotransmitter imbalances dictate mental states, and much can be controlled with medications. Depression is a risk factor for heart disease and may be a greater risk factor than cholesterol. An individual with cardiovascular disease is four to six times more

likely to die if he or she is also depressed (Bloomfield & McWilliams, 2001). Therefore, if someone is diagnosed with heart disease, should we offer a food and exercise plan, prescribe an antidepressant, or provide genetic engineering to correct the depression that triggered the heart disease? Untreated depression is the number one correlate of alcoholism, drug abuse, and many other addictions. Depression is often the underlying factor in overeating; chronic fatigue; insomnia; headaches; bulimia; digestive problems; aches and pains; and many other physical disorders (Bloomfield & McWilliams, 2001). We are discovering that lifting one's spirits is potent medicine; thus, the happier one is, the less often one becomes ill. As people fulfill their basic needs, it is likely that happiness will become an even more valued goal. Moreover, Diener (2000) is calling for a national happiness index for adults. Therefore, should health educators be entertaining and possibly concentrating future health education research on the power of the mood?

Many are stubborn in pursuit of the path they have chosen, few in pursuit of the goal. –Friedrich Wilhelm Nietzsche, 1844–1900

Brain chemistry is key to emotions and possibly disease; however, the brain governs more than just emotions. When you feel terror, adrenaline makes the stomach churn; when you feel frightened, the "flight or fight" response occurs; when you are sexually aroused, the body responds in an unmistakable fashion; the brain affects health as well. Bobby McFerrin's advice of "Don't worry, be happy" could be powerfully good medicine. Personal happiness is the best predictor of good health! Therefore, it seems strange that of the 54,000 studies conducted on depression, less than 1% (n=415) focus on happiness, almost certainly because there are no funding opportunities or money to be made. In the future many disease-treatment paradigms will be managed through chemistry or corrected through genetic engineering; however, the brain and behavior appear be the new landscape for health education. The real voyage of discovery will not only be exploring new landscapes (genome), but also viewing this new landscape with a new set of eyes. This new perception can be accomplished by breaking out of old ways of thinking and embracing a change. Our health education future lies in emotions, personality, and behavior research. Sounds like a health psychologist, doesn't it? If we don't take control over our future, health psychologists will. Therefore, allow me to be crystal clear: in the future, health educators must learn more about mental health and interventions to improve mental health that lead to the mind connection for overall improvements in health status (Huebner et al., 2004).

Success is going from failure to failure without a loss of enthusiasm. –Anonymous

THINKING TOWARD THE FUTURE

As colleges and universities at all levels are placing greater emphasis on research, scholarship has become the standard by which they bestow recognition, provide awards, and allocate resources. Rather than be disappointed, discouraged, and long for the "good ole days" when teaching was the standard, look closely at your world and seize control of the future. The reality is that there is a paradigm shift in academia, so we should use the momentum of the new paradigm to our advantage (Laflin & Black, 2003). It's difficult to find persons who will deny that antibiotics treat an infection, that insulin treats diabetes, or that a broken bone must be properly set. In each case the treatment indicated is the appropriate course of action to effectively deal with the problem. According to Torabi (2004), research is the backbone of health education. Why then would anyone refuse to acknowledge quality research as playing a part in our future?

One must never lose time in vainly regretting the past nor in complaining about the changes that cause us discomfort, for change is the very essence of life. –Anatole France, Nobel prize winner

Having been affiliated with a department of behavioral medicine and psychiatry for the past 14 years, I've learned that being receptive to other approaches to dilemmas can be therapeutic; therefore, we must be receptive to approaches other than teaching to confront the future. Simply put, the way we perceive the world is the way we respond to the world. If our cognition of health education is that all is well, then a remedy is unjustifiable. If we find ourselves in the situation on campus of losing funds and resources again and again, continually fighting for everything and wondering what went wrong, why administrators don't get it, and why it happened again, it may not be that administrators don't get it, but maybe health educators are pushing a bad idea. John Kenneth Galbraith (Bloomfield & McWilliams, 2001) notes that when "faced with the choice between changing one's mind and proving there is no need to do so, almost everyone gets busy on the proof" (p. 149). We're human and, like flowing water, will gravitate toward the path of least resistance. We can't always choose what happens to us, but we can choose our reaction to it. We can and must take control of our future.

Within the problem is the solution to the problem. –Chinese proverb

I have collected many pessimistic health education scenarios; however, three recent conversations should oblige us to take notice of what is happening to health education. First, because of budget cuts a health education chair was asked to return three positions to the dean and to justify an alternative possibility to retain them. After evaluations the positions were redirected to another department with greater documentation of publications in high-impact journals. Second, another colleague shared that 20 years ago when she was hired, there were 12 health educators in the department; today there are only 2, and when those retire so will the program. Third, another noted that his department was replacing health educators with psychologists or exercise

physiologists who possessed superior research skills, which afforded the department greater potential for grants, quality research, and publication in high-impact journals. Sadly, I could share many similar stories; nonetheless, these types of anecdotes should concern us greatly.

Nothing is impossible; there are ways that lead to everything, and if we had sufficient will, we should always have sufficient means. It is often merely for an excuse that we say things are impossible. –Francois de la Rochefoucauld, 15th century moralist

Having read several books about change and thinking, John C. Maxwell's book, *Thinking for a Change* (2003), in particular, approaches both thinking and change in sensible ways. He notes that all successful people have a trait in common, and that trait is good thinking. Furthermore, he notes to change one's life, one must change one's thinking. One's life today and tomorrow is the result of one's thinking yesterday. The power of knowledge to which Robert Gold referred to in his scholar address (Gold & Kelly, 1988) only possesses power for someone who can think. The problems we are facing today cannot be solved with the thinking of yesterday, so we've got to be thinking and applying knowledge of the future.

The reasonable man adapts himself to the world; the unreasonable man persists in trying to adapt the world to himself. Therefore, all progress depends on the unreasonable man. –George Bernard Shaw, playwright

A clear example of our limited thinking is revealed by McDermott, Liller, Ward, and Goodrich (1989), who in a random sample survey of "Who's Who in Health Education" attempted to gain insight into the preparation of health educators in research and practice for the 1990s and beyond. What they exposed with perfect acuity "was not insight about the future, but rather, profound and detailed hindsight of the ideal preparation of the health educator for the 1970s. It seems that the best health education minds could not come to terms with change and uncertainty, and being out of their comfort zones," (p. 270, McDermott, 2000).

If Columbus had an advisory committee, he would probably still be at the dock. –Justice Arthur Goldberg, 1908–1990

Maxwell (2003) notes that unsuccessful people focus their thinking on survival and average thinkers focus on maintenance, whereas successful people focus on progress. Simply put, if you are not thinking of the future, then you are regressing. The primary reason people fail to achieve their dreams is that they wish to change the result without bothering to change their thinking. Mapes (2003) asserts, "If you think the way you have always thought and you do what you have always done, you'll always get the results you've always gotten," (p. XXI). For years we've behaved in certain ways because we've been somewhat successful and believed in a certain foundation of content and theory, which adheres to the insanity principle that we're doing what we've always done but expecting different results.

Some universities are approaching financial accountability by reemphasizing teaching. These universities have chosen a practical but unfortunate path that to them is very reasonable. They believe they do not possess the proper resources or faculty required to compete with the more successful research institutions. Moreover, they are experiencing massive financial cutbacks and are fighting for survival. However, they are aware that state-supported institutions usually receive funds based on the number of students enrolled; therefore, they reemphasize larger classes, lower their standards, and increase teaching loads, all of which results in more funds allocated. For these universities it's all about more FTEs (full-time equivalency), not research. They are adhering to the Cuba Gooding principle offered us in the movie *Jerry McGuire*, "Show me the money." These universities deal with financial issues within their comfort zones, revert to what they know, and do what has worked for them in the past: teaching. These universities do not understand that the real issue is not continuing to be state supported but to find entrepreneurial ways to locate alternative sources of funds to allow them to move from less state-supported funds to more state-assisted funds. Although embracing teaching at the expense of research to ensure survival and financial solvency may first seem to be a prudent approach, it is a step backward. The answer lies ahead; we should never take a step backward, not even to gain momentum. Again, I am not abandoning teaching, but improving research.

Truth is the cry of all, but the game of few. –George Bishop Berkeley, 1685–1753

Some faculty, chairpersons, and administrators fail to understand the potential that research and research centers within departments and colleges possess for creating opportunities for generating substantial funds. Our university, like most, is experiencing financial cutbacks, but our research center is flourishing. Research money immunizes and isolates our center from the financial crises being experienced throughout the country. Other than my salary, every full-time faculty and staff is funded on soft (grant) funds. Nonetheless, we have sufficient funds to conduct research projects, travel, enjoy every new technology gadget, and provide healthy salary increases at a time when the university is cutting salaries, freezing new hirings, offering retirement packages, and laying off personnel. There are many successful centers throughout the country like ours that are self-supporting and contributing millions of dollars to the university via indirect costs, to individual health education departments, and to the investigators via incentive plans. These research centers are not a drain on departmental resources, but serve as financial assets to departments.

The immature mind hops from one thing to another; the mature mind seeks to follow through. –Harry A. Overstreet, author

As a parallel issue, how should one respond when the old guard is unable to pass on any research skills, appreciate quality research, or understand the potential funds that can be unleashed through quality research? A person I respect is William Zimmerli. Until the past decade I did not know him well; however, I distinctly recall him thanking me for founding the American Academy of Health Behavior. He shook my hand and stated, "Due to the number of publications required of applicants, it might be close as to whether I qualify as a member, but that is irrelevant. The profession needs a research organization so that we can showcase our limited quality research." I clearly recall, he was not angry, bitter, or upset that he might not qualify as a member, for he was more concerned about the profession. Interestingly, one would be amazed as to the number of quality researchers, members of the Academy, and leaders in our field who credit Dr. Zimmerli with strong research mentoring to include the importance of research, providing research opportunities, and encouraging quality research. This was a courageous path to follow, for Dr. Zimmerli would be the first to admit that he does not possess superior research skills; however, it is obvious he knows and understands the value of research to the profession, for he clearly thinks and dreams in the future. (On a side note, Dr. Zimmerli qualified as Academy member and is now its unofficial photographer.)

DREAMING IN THE FUTURE

Hopefully, I've sufficiently cracked our current paradigm armor to at least entertain the notion that health education needs to progress to the next level of growth and that quality research will transport us there. Eleanor Roosevelt once remarked that the future belongs to those who believe in dreams. I'm not suggesting that we stumble through life looking at the stars, but I am encouraging you to creatively dream of the future of health education and make it happen.

In the beginner's mind there are many possibilities; in the expert's mind there are few. –Shunryu Suzuki, author *Zen Mind, Beginner's Mind*

Most people fail to realize their dreams because (1) there is no single clearly defined objective, (2) there is no mechanism for sustaining motivation, (3) there is not enough time to devote to it, (4) there is little or no support, and (5) there is no understanding of how every seemingly unrelated little improvement advances the big dream (Levesque & McNeil, 2003). If one has focus, energy, and enthusiasm, dreams need not fail to come true. It is difficult to dream about the future of health education without having a tinge of excitement in one's belly, so allow me to share how I have entertained my research dream for over 2 decades and illustrate how I addressed the five aforementioned dream obstacles.

You can choose to change your own paradigm. –Elbert D. Glover, health educator

First, to make dreams come true, one must unleash the full power of determination. It's as though one is on a mission. One needs both intensity and focus. My dream is very precise and clearly defined—I want health educators to become premiere health behavior researchers, so we can be respected and entertained as equal partners at the academic table.

Second, generating sustained motivation, inspiration, or drive is paramount, because everyone is always motivated at the outset, but inevitably this energy fizzles out. It's that New Year's resolution that one rarely follows through on, or it's that deal one strikes with God when a loved one is in trouble. These dreams rarely come to fruition because there is no time-release mechanism for reenergizing one's motivation. How can this motivation be sustained? In *Dream Crafting* (Levesque & McNeil, 2003), the authors provide excellent techniques for sustaining motivation. For my research dream much of my motivation comes from within. Rightfully or wrongfully, I honestly feel like the self-appointed research ambassador who has to pick up the research mantle and carry this research mission into the future, while all along having the distinct sense that if I didn't do it, it wouldn't get done—now that's a mission with motivation that clearly reveals intensity and focus. There are two ways of spreading the research light: by the candle… or the mirror that reflects it. Therefore, my specific mission is not carrying the research mantle for everyone, but convincing as many people as possible that carrying the research mantle is the responsibility of everyone who possesses a doctoral degree.

Third, with today's responsibilities time is a common concern of most people. However, I challenge colleagues who claim to never have sufficient time, to keep track of their time for 2 weeks to evaluate how their time was spent. One may be surprised to discover the amount of time wasted chatting on the phone; visiting with colleagues; discussing yesterday's events; rehashing old discussions; sending e-mail; enjoying lengthy lunches; surfing the Internet; trading jokes at the water cooler; and interestingly, unconstructive dreaming. Just as I set aside time to conduct research or write, I set aside small blocks of time to dream of short- and long-term goals. Despite my best thinking occurring early in the morning, I find the best time for my dreaming to be at the end of the day, when I reconstruct and reflect on the day's events. Dreaming doesn't have to be long, but the block of time needs to be spent constructively looking at the future not only for the profession but, more important, for yourself. Early in my career I dreamed and set aside 18 short- and long-term goals and within a decade accomplished all but one. The final one, chairing a department to the number one ranking in the country, most likely will never occur, for I may have waited too long to actively pursue this goal. Moreover, until recently, I did not possess the burning desire to undertake this mission, for I viewed administration as too political and was concerned that it would compromise my ability to always seek and speak the truth. So possibly my inability to reach this goal was hampered

by my own lack of motivation, enthusiasm, and time or 1, 2, and 3 above.

Practitioners of the old paradigm who choose to change to the new paradigm have to be courageous. –Elbert D. Glover, health educator

Fourth, gaining support is critical for accomplishing any mission. There is no need to go at it alone; however, one must first reduce and ultimately eliminate motivation-sapping resistance from around you. Techniques are available for turning resistance into support and for inspiring others to become directly involved in helping achieve one's mission and ultimately one's dream. I personally carried the idea of forming an organization of researchers around for nearly 2 decades and at various health education meetings would attempt to sell the idea. More often than not, I met with resistance, but there were colleagues who agreed with me, so in April 1997 we formed an organization devoted to research and researchers. Now I am guaranteed that at least once a year for 1 week everyone around me understands the need and importance of quality research. It is exhilarating to converse with colleagues who have similar dreams; I always walk away inspired, so in effect, I reduced the nonbelievers and used the support of research colleagues to inspire me. And what was once my dream and the dream of few is now the dream of many, so I am not going at it alone; others have picked up the research mantle and are carrying it into the future.

Fifth, it is important to dream, for dreams create a sense of purpose, crystallize the goal, and clearly define the goal, which in turn makes it easier to achieve. It is important that all persons cultivate the habit of dreaming, not just as I have applied to my personal research goals, but as it applies to all aspects of one's life. It is important to recognize that small dreams are what larger dreams are made of, so make sure that the priorities of your dreams are laid out in the proper sequence. While dreaming constructively, no dream is too small or too large, for progress is always an idea away. Moreover, if one can dream it, one can imagine it. If one can imagine it, one can see it. If one can see it, it can happen.

The destruction of the old gives birth to the new. Creativity is first of all an act of destruction. –Pablo Picasso, painter and sculptor

SUMMARY

Although I may be perceived as being somewhat heavy-handed on health educators, destruction of the old always gives birth to the new. Prophecy is a risky business, for we do not know what the future holds. Moreover, one never knows the culmination of such a personal and honest address, but my hope is that this address resonates and takes flight with the profession. I hope that the fundamental act of admitting that quality research and research training for health educators are critical for our future might set in motion the necessary chain of events and processes to solve or improve our current predicament.

Painfully, I've learned that the higher one flies, the more chances one takes, and the more one strays from the mainstream, the bigger target one becomes. Therefore, please accept my uncommon thoughts about common matters, whether you agree with them or not, as an honest and sincere attempt to propel the profession into the future. The profession has been good to me and has allowed me to attain more than I could have ever possibly imagined, but success in the past does not guarantee success in the future. We must not only dream of the future, but also confront and plan for the future. Changing one's thinking, adopting a new research paradigm, moving out of one's comfort zone, being open to the future, and dreaming of the future are supremely courageous paths to follow, for they are often met with criticism. Be assured that since the beginning of time new ideas and new paths have always been resisted.

Actually, a great deal of my success can be attributed to taking what Robert Frost called "the road less traveled" even when the more traveled path is more assuring, comforting, and acceptable. As a youngster I owned and prized an old tattered map of the United States that allowed me to dream of the places I hoped to one day visit. In this map, the blue roads were national highways, the red roads were the state highways, the black roads were routes, and the yellow roads were the less traveled scenic paths. For me the yellow roads, the less traveled scenic paths, were always more interesting and held greater allure than the more traveled blue, red, and black roads. Little did I realize that taking the less traveled path would become a tenet of the way I would one day approach life.

Adam Smith (1975) noted that everyone usually does what is best for him- or herself and not what is best for the group. However, we must honestly examine ourselves and our profession and look beyond our immediate circumstances to determine what is best for all concerned. Change is unavoidable in human life, nature, and also in academia. I am suggesting that we saddle up a research horse and ride this bucking horse into the future, for it is clear that the future will be saddled with many challenges but none greater than producing quality research and providing quality doctoral training. In the Old West, they referred to the Colt .45 as the great equalizer, because it made everyone equal, young or old, rich or poor, strong or weak, good or bad, right or wrong. I am suggesting that the great equalizer in academia today is production of quality research and quality research training for our doctoral students.

As he descended from the Apollo XI in July 1969 and set foot on the moon, Neil Armstrong stated, "That's one small step for man, one giant leap for mankind." For health educators the first step toward better research training is the gigantic leap for the profession, so let's venture together through the crack in the research door and eavesdrop on our future to meet it head on and realize our own destiny, for destiny is not predetermined; it is what you make of it. In the 19th century Arthur Schopenhauer stated that every truth passes through three stages before it is recognized: In the first it

is ridiculed, in the second it is opposed, and in the third, it is regarded as self-evident.

Finally, I must attempt to dispel Carlyon's (1978) assertion that health educators have no sense of humor. First, my grandmother at age 60 started walking 5 miles a day; today she is 95 and we don't know where the hell she is. Okay, that was weak, so let's try another. My mother is 75 and an exceptional woman, to this day she doesn't use glasses….she drinks right out of the bottle. Well, I never stated that health educators possessed a good sense of humor, only a sense of humor.

My final disclaimer to this scholar address is:

"No health educator was intentionally harmed during the delivery of this scholar address."

Thank you.

SUGGESTED READINGS

Persons interested in obtaining literature that was instrumental in developing this address can easily go to the references cited; however, other literature was influential in developing this address.

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