

An E-Learning Strategy Towards a Culture of Cyber Wellness and Health for WMSCI 2007

Dr. Janice PUTNAM
Department of Nursing, University of Central Missouri
Warrensburg, MO, 64093, USA

and

Ms. Karen L. PULCHER
Department of Nursing, University of Central Missouri
North Kansas City, MO 64116, USA

ABSTRACT

An overview of the processes, theoretical constructs and technological methodologies used in a comprehensive e-learning wellness program designed for college students is presented. A longitudinal approach to lifestyle modification beginning at the freshman level and continuing to graduation is developed and discussed. Online strategies approach education, risk behavior and lifestyle modifications that address physical and psychological well being. Perspectives and lessons learned from implementation and evaluations are discussed and implications for international applicability are presented.

Keywords: cyber-wellness, lifestyle modification, e-learning, college student, health, smoking cessation, obesity.

1. INTRODUCTION

According to the Task Force on Cyber Wellness, cyber wellness is defined as “the positive well-being of Internet users and a healthy cyber culture for the Internet community” [1] This Task Force identified a need for strategic initiatives for young people who lack the direction of experienced older people in dealing with online issues. At the same time, the Pew Internet and American Life Project reported that 52 million Americans are using the Internet for health information [2]. Of these, 70% used this information in making health decisions, and 48% used the advice to improve their self-care.

New programming formats and delivery methodologies are needed to meet the growing cyber wellness and health need of the college population. This is particularly true in the areas of health education, risk behavior and lifestyle modification. In congruence with this definition, one Midwestern university is using the internet to help promote such a culture of cyber wellness and health for the college community. This is accomplished through a structure of comprehensive e-learning wellness programs which provide learning through various communication and information technologies

managed on the Internet. These programs are helping to meet identified problems including rural location, diversity of student population, problems with access/convenience and need to meet health objectives for leading health indicators.

2. THEORETICAL UNDERPINNINGS

Because the development of a cyber wellness culture is a complex, evolving and multi-tiered phenomenon, the use of several theories addressing different constructs was indicated. Maslow’s Developmental Theory [3] and Roger’s Theory of Diffusion of Innovation [4] along with knowledge of generational influences were utilized.

Hierarchy of Need

Abraham Maslow identifies a pyramidal approach for personal development and reaching human fulfillment. Psychological self actualization, emotional and cognitive, depends on the provision of adequate resources to ensure physiological survival and basic security and safety. The processes involved in developing a culture of cyber wellness and health assumes that the student has basic survival needs met such as food, shelter, safety and financial resources. In developing a cyber culture of health and wellness, the developer must understand and appreciate the survival constraints of the local cultural environment and modify or adjust the cyber culture accordingly. The proposed plan is an outline for such modifications.

Theory of Diffusion

Rogers Theory of Diffusion of Innovations [4] postulates that innovations are integrated into society through a lengthy S curve process. Each of the sections of the S curve represents the adopters who have key traits that are crucial to the development and planning of cyber-wellness programs. The process of diffusion in a cyber wellness culture begins slowly by innovators who like to take risks. In time, there is an exponential adoption of the innovation by a majority of the population. Lastly, the innovation is adopted by the laggards who have tendencies towards fear and doubt. In addition, the change process includes a progression from knowledge to persuasion to decision making to implementation and, lastly, confirmation. Therefore, the speed at which cyber wellness and health programs are adopted differ on the S curve, particularly since this is a longitudinal process.

Generational Influences

Currently there are predominantly three generations found in the college and university population. The Boomer generation, the non-traditional student, was born between 1946 and 1964. The Generation X or Nexter was born between 1965 and 1976. The traditional population of college students encompasses the Generation Y or the Millennial generation born between 1977 and the present.

The Boomer generation, now in their late forties, 50's and early 60's, are realizing the effects of their lifestyle and risky behaviors associated with "sex, drugs and rock and roll" [5]. Heart disease, diabetes, cancer and stroke health issues associated with these life values currently affect the health and wellbeing of the Boomer population. This population is motivated by power, position and prestige and value social connectedness and communal involvement to support these needs. Online methodologies addressing these values will prove to be successful for the Boomer population. One proposed example is the development of personal cell-phone conference call software systems and personal web cameras very similar to the Dick Tracy two-way wrist TV computer/communication device.

The Generation X or Nexter, born between 1965 and 1976, is noted for being cynical, skeptical, "life-first- work- second" value system versus the Boomer value of "live to work addicted to work"[5]. The Nexters need the Internet flexibility to meet their needs in life and in their work. This generation is and will continue to direct and motivate the technology industry to develop futuristic applications.

The Millennial, Gen Y or Net Gen generation, currently in their 20's, is the most technologically savvy cohort currently in the college system. Information technology is neither intimidating nor undesired making them a prime candidate for e-learning and cyber wellness programs. This generation will challenge technological applications for the future.

The Millennials will eventually be replaced by the rising of Generation Z. Generation Z began using technology as young preschoolers before reading ability and will see the necessity of technology in day to day living. Both the Millennials and Gen Z are faced with rising health concerns such as obesity and related pathologies. These generations are currently engaged in Myspace, instant messaging, blogging and digital audio/video

devices for personal use. This generational cohort will demand that these technologies be provided.

3. STRATEGIES

Lifestyle modification

Most colleges are able to introduce and initiate acute or short term lifestyle strategies such as alcohol and drug programs. The success of these programs is short lived and may alienate the student who is just beginning to experiment with these substances due to newly discovered freedom. Short term strategies do not result in long term changes that must be realized for quality of life. In order to realize long-term strategies the college freshman student is introduced to new concepts, terms, and goals, objectives that may or may not represent those of the individual's culture. Potentially, the traditional freshman is cognitively able to assess and anticipate personal lifestyle changes needed to realize or plan for lifestyle goals, such as career, academic or course path leading to a chosen career, and should be able to identify strategies to achieve these goals. Congruent with this developmental ability and progress is the potential to identify lifestyle risks and behaviors that constrain or afford physical and psychological wellbeing. The potential is present but the academic resources are limited in scope, use, accessibility and applicability. The Internet offers a resource that is relatively inexpensive for the institution and yet is accessible and flexible for the college student regardless of generational cohort status.

This organization serves a rural community consisting of many first generation college bound students, citizens from underserved areas with diversified socioeconomic factors. Students at the freshman level, removed from their normal environments, develop strong peer relationships which impact their lifestyle choices in the formative years. Many students are unable to recognize their lifestyle behaviors as "risky" or "undesirable" based on established health objectives of the Center for Disease Control [6]. Academic institutions are in a key position to address long-term health and wellness strategies but are unable to provide sufficient resources including personnel, time and finances in order to address risky lifestyle behaviors. College students are often unaware of the need to assess or change their current or future wellbeing and health and typically continue in pre-established, socio-cultural directed living.

Obesity

Obesity is a national epidemic. Obesity is clearly linked to diabetes, heart disease, orthopedic disorders as well as psychological wellbeing. Students are asked to calculate their current Body Mass Index (BMI) [7] as an assessment of weight based on height and gender. Health standards are set for BMI nation-wide for all ages. Many students are shocked to learn that they are obese or morbidly obese when they assumed they were just a little "heavy" or a "little overweight". Some students are also shocked to learn they are underweight. This self assessment is useful in identifying an indicator of an unhealthy lifestyle resulting from food choices and activity as well as socio-cultural influences.

An online course for weight reduction was offered as a pilot course (N=30). Objectives included self assessment,

establishing realistic personal goals and peer support. Students in the sophomore year of college identified healthy food choices, preferred successful physical activity and developed personal accountability with their peers through Breeze® presentations resulting in measurable long-term achievement of weight loss. Graduating seniors who participated in this pilot course experiences a BMI reduction of 2-3 %.

Smoking Cessation

Smoking is directly linked to heart disease, lung disease and stroke rates leading to death and is projected to “kill more people in 2015 than HIV/AIDS” [8]. Smoking as a quality health indicator is also related to maternal and childhood health. College freshman are of childbearing age and may begin experimenting or actively participate in intercourse while at the same time fail to practice safe lifestyle behaviors. An online course for smoking cessation was also implemented as a pilot course (N=14) resulting in a 90% quit attempt rate which is comparable to the 89% quit attempt rate realized by the American Lung Association face to face classes[9].

Socialization and Cyber Wellness

Not only are e-learning platforms such as Blackboard® being utilized in the management of courses, but they can be used to promote socialization, organization functions and cyber wellness within the university. One example of this innovative approach is the use of pseudo courses or forums. The pseudo courses or forums are set up with a primary focus of communicating among their members. Members are enrolled in these courses for what may be an extended period of time. For instance, one university is using Blackboard® to organize its national program, Preparing Future Faculties Doctoral Fellowship [10]. Members are enrolled into this pseudo course or forum and are encouraged to share their individual professional information, information for activities of interest, and discussions related to pertinent teaching issues for the three-year period that they have received this Fellowship. Another institution reported using a pseudo course as a method to provide ongoing tutorials for the continuum of advances in the use of technology in the library for information management [11]. In this second example, information addressing cyber wellness such as the e-Health Code of Ethics and interactive tools developed to evaluate the quality of health related websites are provided.

Mental Health

Some specialized services have been contracted out by the university. The use of such online services such as e-Chug and Ulifeline provide online resource strategies for mental health and substance abuse issues [5]. E-Chug and Ulifeline provide institutional usage assessments in addition to online support for such issues as alcohol abuse, depression and suicide. Costs were grant supported and an ongoing evaluation of these services is in process.

4. INTERNATIONAL IMPLICATIONS FOR INTERNATIONAL APPLICABILITY

Implications for international applicability of a cyber wellness culture to improve and enhance health are evident. The four leading health indicators projecting mortality in the year 2030 include heart disease, strokes, HIV/AIDS and lung disease [12].

These indicators are being addressed through cyber wellness programs such as substance abuse programs including tobacco cessation, weight management and mental health/social programs. This approach aligns itself well with the eight Millennium Developmental Goals by improving health through education, disease treatment and prevention [8]. Important considerations will include the presence of an online environment conducive for social and economic viability, and the readiness of a country/community for such programs [3].

Community program templates useful for individual organizational development and adoption are available from the Cyber Wellness Task Force [1]. These templates are suggested as a starting point for communities to organize a strategic initiative. These templates address assessment, intervention and maintenance of behaviors that promote cyber wellness. The CWTF has used these templates to address the needs of 86,000 students in Singapore [1].

5. ETHICAL CONSIDERATIONS

According to the Cyber Wellness Task Force [1], there are potential risks involved in using a medium such as the Internet including the availability of false or outdated information, intrusion of privacy, abuse and criminal activity. In addition, the e-Health Code of Ethics [14] points out that it is important for the consumer to be aware of these risks and others when using the internet to manage their health. Both groups of experts agree that through an approach including strong ethical values and best practices, the risk benefit ratio is strongly weighted to the benefit side. Ethical values outlined by the e-Health Code of Ethics include candor, honesty, quality, informed consent, privacy, professionalism, responsible partnering and accountability.

6. FUTURE DIRECTIONS

The possibilities for improved cyber wellness and health in the future through the advancement of a cyber wellness culture are infinite. According to Thede [15], the direction of this growth can be organized methodologically, technologically, or according to needs. Examples of future directions using a methodological approach include program development utilizing developmentally appropriate gaming and simulation of health scenarios addressing specific health topics. Technology growth can change the future of cyber wellness through the use of applications such as pod-casting, vod-casting and tailored text-messaging. Future development of cyber wellness programs can also be influenced by barriers such as rural access, cultural influences and poverty. In areas underserved by Internet capabilities new health information will continue to be met using and current cultural communication systems.

Individual initiative impact is influenced by generations; different age groups have age-related preferences. The aging Boomers may not appreciate e-learning strategies as many are techno-illiterate or incompetent. Boomers will continue to pay for and seek collective social support strategies as opposed to individual online methodologies that fitness clubs offer, as well as continued interest in quick fix strategies with time efficient plans that maximize results and minimize stress. Gen X and GenY may utilize iPod workouts and iPod video motivational mp3 files that encourage those that need social support but don't want to pay a personal coach in order to lift weights or work out. The Net Gen group will also want less expensive options and

less costly nutritional supplements. The cyber wellness health needs of the Millennial generation are anticipated to include personal safety issues [16].

7. CONCLUSIONS

Health is one of the most important aspects of every person's life. In order to promote well being in the technological world in which we live in, purposeful programming addressing cyber wellness is called for. Presently this application of e-learning is localized to the university or college setting. However the cyber wellness approach is generalizable for the larger community. As this new culture develops, implications for technological developmental needs, diffusion of innovation and generational attributes should be considered. The development of cyber wellness as an avenue with which to achieve greater well being for all generations in a wide variety of cultural setting is achievable and important.

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