

Outcome Based Learning Systems

The Efficacy of Health Education Kiosks Deployed in Public Settings

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www.StAndrew.com

For over a decade, St. Andrew Development has created, produced, deployed and supported web-based, self-service interactive health education kiosks (HEK). These versatile and durable stand-alone learning tools have amassed an extensive record of addressing the health education needs of millions of people in areas such as cancer, heart disease, smoking cessation (youth and pregnant women), domestic violence, diabetes, hepatitis, diet & nutrition, HIV/AIDS, depression and domestic violence, among others. This record has made St. Andrew the leading provider of customized, health education kiosks in the world.

In 2006, St. Andrew produced their most ambitious program to date. This program, the PA Commission for Women, *Women's Wellness Guide* (WWG) is now distributed via the Internet and thirteen health education kiosks placed throughout the Commonwealth. The program continues to draw the support of the PA Commission for Women, the Highmark Foundation and the PA Dept of Public Welfare.

Each kiosk is equipped with St. Andrew's proprietary kiosk control software which serves several functions including:

- Permits the deployed health education programs to operate on kiosks in a self-service mode.
- Tracks and records usage into a local data base on the kiosk which is regularly uploaded to St. Andrew's server for web-based review by registered kiosk subscribers.
- Solicits and records the results of a self-assessment instrument to measure user perception of the kiosk and their propensity to change behavior consistent with messaging contained in the health education program.

The remainder of this document will be devoted to the discussion of the last of these three items.

The WWG project was originally funded by the Highmark Foundation with the condition that post deployment analysis contain data from which objectively derived conclusions on efficacy and outcomes could be drawn. Given that requirement, the services of specialists in the development of instruments to assay outcome utility were secured. Researchers at Penn State University developed a self-assessment questionnaire using an assessment process referred to as the discrete visual analog scale (DVAS) processes.

Some details about DVAS are:

- It is more generic than a Likert-type item and often used in interactive learning settings.
- There are no verbal labels at all on the points along the assessment scale, except to define the poles of a continuum.
- The user has no other cues other than the poles and is able to self select their response.
- The printed format implies specific metric relations among response levels. It is discrete because pre-specified levels may be selected by the respondent.

The DVAS assessment instrument was integrated into five modules on the Women's Wellness Guide; breast, diabetes, lung cancer, heart and weight management. The DVAS tool was not-optional; i.e. users

were required to complete the evaluation to advance in the application. The purposes of the assessment tool were to objectively determine and gauge users’:

- Reaction / opinion of their interactive experience using the kiosk in the sample topics.
- Propensities to alter their behavior (adapt a healthy life style tip or practice obtained) learned or reinforced from the program.

Preliminary analysis was conducted on the results of a sufficient number of non-optional users to derive a statistically reliable response (confidence interval of 95%).

Specifically, two kiosks with a combined 36,600 “hits” which will correlate into approximately an estimated 6,000 unique users over a three month time period from late January to late April 2009 were analyzed.¹ The composition of data extracted from the two units was nearly identical in terms of percentages and are totaled for purposes of this discussion. It should be noted, however, that both locations had a predominance of women hailing from a demographically underserved constituency. The survey results are self-revealing.

When posed with the question, “The *Women's Wellness Guide* is a tool to teach you how to stay well and take control of your health. How helpful was your experience using this?” 90% of respondents indicated that the experience was helpful, somewhat helpful or very helpful. (See Graph 1)

In response to the question, “After reviewing the information on [specific disease], how likely are you to make healthy lifestyle changes?” 87% of respondents indicated that they would be likely, more likely or most likely to make lifestyle changes. (See Graph 2)

When viewed in its entirety, the data in this analysis clearly supports the argument that self-service health education kiosks are viable education and outreach tools. Further, by equipping these devices with DVAS instruments, the outcomes of users’ exposure to health information can be measured and further used to determine the value model of investing in the kiosk learning modality.

St. Andrew remains committed to exceeding its standard of excellence and incorporating the DVAS tool into all of their interactive health education kiosks. Of paramount importance, this strategy will assure that St. Andrew’s clients continue to benefit from the capture of objective, outcome based data in a way that will either validate or invalidate their investment in and measure the effectiveness or lack thereof in their health education programs.

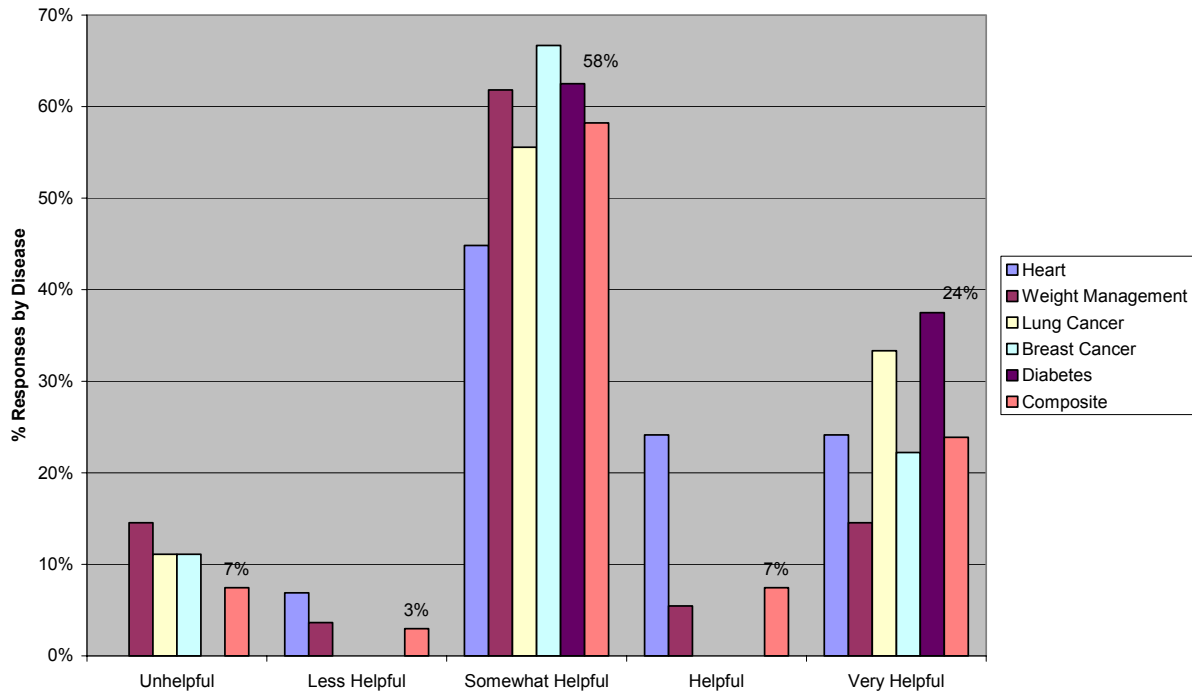
Finally, it will also continue to maintain St. Andrew’s role as a world leader in the area of developing, deploying and supporting assessment based, value-added self-service learning technology projects.

For further information on St. Andrew Development’s health education programs email Wellness@StAndrew.com, call 717-848-5818 or visit the web at www.StAndrew.com

¹ The two locations were Camp Hill Men’s Correctional Institute in Camp Hill, PA and a social services office in Wilkes Bare, PA

Graph 1 – How Helpful was the information on the Kiosk?

**Womens' Wellness Guide Health Education Kiosk
Mesasure of Users' Self-Assessment of Value of Information in Kiosk**



Graph 2 – How likely are you to change your behavior from what you learned on the kiosk?

**Womens' Wellness Guide Health Education Kiosk
Mesasure of Users' Likeliness to Adopt Lifestyle Changes Learned During Interaction**

