Web 2.0: Rates of Adoption, User Characteristics, and Implications for the Marketing of Public Health

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Overview

• Introducing Web 2.0
• Research Purpose, Aims, & Questions
• Methodology & Study Synthesis
• Key Findings
• Implications
**Web 2.0 Defined**
The next generation of person to person communication.

**What is Web 2.0?**

- **Two-Way Communication:** Communication by preparing and sharing content online (Lefebvre, 2007; Thackeray, Neiger, Hanson, & McKenzie, 2008).

- **Web 1.0:** Static content, little to no participation, and web pages primarily updated by a web developer (Therapy, 2007).

- **What is Shared?** Information, photos, videos, text, links, etc.

**Key Terms**

- **Social Media:** Web-based conversations between people.

- **Content Trail:** Ratings, reviews, comments, postings, and clearly marked information pieces which demonstrate online socializing (Evans, 2008).

- **User-Generated Content (UGC):** Content created online (Krishnamurthy & Dou, 2008).

- **Requirements:**
  1. Published publically on a Web 2.0 site.
  2. Display creative efforts.
  3. Created outside a professional routine or practice (Organisation for Economic Cooperation and Development, 2007).
Web 2.0 Platforms
Cost-free technologies that facilitate social media and the creation of UGC.

- **Blogs**: Online diaries with textual entries, images, hyperlinks, video and other media. Readers can comment and subscribe (e.g., Blogger.com; Eason, 2007; Kennedy et al., 2007).

- **Wikis**: Writing spaces where information can be entered, edited, and organized by interested parties (e.g., Wikipedia; Kennedy et al., 2007).

- **Social Networking Sites**: Personal websites within a larger website. Individuals can form communities by linking up as friends and share video, text, photo content, etc. (e.g., Facebook, Twitter, and MySpace; Lefebvre, 2007; Nickelston, 2009; Skiba, 2008; Uhrig et al., 2010).

- **File Sharing Sites**: Files available to users on a peer-to-peer network (e.g., Flickr or YouTube; Eason, 2007; Kennedy et al., 2007; Thackeray et al., 2008).

Web 2.0 Prevalence
Revolution of how users are interacting on the internet.

Video source: Prof. Erik Qualman, a leader in Web 2.0 research from Hult International Business School and author of Socialnomics: How Social Media Transforms the Way We Live and Do Business.
Web 2.0 Campaigns
Commercial and social marketing online.

Campaigns
- **Social Marketers**: The Heart Truth campaign used social networking, blogs, web applications, photo galleries, and bookmarking sites to promote National Wear Red Day and the Red Dress Collection in both 2007 and 2008 (Taubenheim et al., 2008).
- **Goal**: Visit the Heart Truth website for information.

**Evaluation Results**:
- 16% of web traffic from Dr.Helen.com in 2007 and 11% in 2008 from Designmom.com.
- RDC video views - 90,000 times in 2008.
- Photo views - 12,320 views from Flickr.

- **Commercial Marketers**: Georgetown Cupcake 800 daily sales after two weeks of blogs and social networking discussions (Nicholls, 2008).

Overall Aim
Provide recommendations for social marketing practitioners, communicators, researchers and policy makers.

Exploratory Research Questions
1. What are the adoption rates of Web 2.0?
2. What are the Web 2.0 user demographics and psychographics?
3. What is the scope of Web 2.0 usage?
4. How is Web 2.0 behaviour change measured?
5. What are the differences in willingness to use Web 2.0?
Phased Approach
Phased approach to examine research questions.

1. Systematic Literature and Online Search
   - Q1 – Rate of Adoption
   - Q2 – Demographics/Psychographics
   - Q3 – Scope of Usage

2. Qualitative Structured Interviews with Leading Practitioners and Researchers
   - Q4 - Measurement

3. Online Quantitative Survey with Web 2.0 Users in Australia, Canada, and the United Kingdom
   - Q5 – Willingness to Use

Phase 1
Comprehensive literature and online search.

Search algorithm:
(Internet; OR Web 2.0; OR social networking; OR blog*; OR podcast*; OR wiki; OR file sharing; OR social bookmark*); AND (Facebook; OR MySpace; OR Twitter; OR Wikipedia; OR Blogger.com; OR LinkedIn; OR YouTube; OR Flickr; OR RSS Feeds; OR del.icio.us; OR reddit; OR Digg) AND (Social marketing; OR marketing; OR marketing for social causes; OR campaigns; OR programs) AND (Health promotion; OR public health; OR health information; OR health intervention; OR health education) AND (Users; OR usage; OR adoption rates; OR scope; OR exposure)

Databases, search engines, and listserves:
InformaWorld; JSTOR; MEDLINE; ProQuest; Psych INFO; PubMed; SAGE Journals Online; Science Direct; Social Sciences Journals; Google scholar; Google search engine; Social marketing listserve

Additional journals:
Phase 1
Existing Web 2.0 research.

Literature & Online Search
- Phase 1 Description:
  Using a search algorithm, the review included...
  - Academic studies
  - Grey literature (scientific and technical reports, government documents, etc.)
  - Research reports
  - News articles
  - English-speaking

- Phase 1 Qualitative Synthesis:
  - Qualitative synthesis:
    - User demographic/psychographics
    - Adoption rates
    - Scope of commercial and social marketing efforts (products/behaviours)

Reach and Growth
*Increased Internet and Web 2.0 reach and growth over time*
The Internet is now being used globally.

**Overall Internet Usage**

- **Globally**: Over half the individuals in 35 countries had Internet access in 2007 (Miniwatts Marketing Group, 2010).
- **Gender Differences**: Men slightly more likely to use the Internet than women regardless of where they live (Lenhart, 2009).
- **Digital Divides in North America**: African-Americans and French-speaking Canadians less likely to use the Internet than Caucasian Americans and English-speaking Canadians (Lenhart & Madden, 2007).
- **Increases Projected**: This year, usage projected to increase from 1 billion in 2006 to 2 billion users (Computer Industry Almanac, 2006).

**Social networking and blog sites are now being used globally.**

**Social networking / blog sites reach by country in April 2010**

(from Nielsen 2010)
Reach by Geography
Example: Facebook has global reach.

Facebook reach by country in April 2010

From Nielsen (2010).

Life Cycle of Blogs
133 million blog records recorded by Technorati from 2002-2008

The life cycle of blogs from 2002-2008

From Chou, Hunt, Beckjord, Alles, & Nose (2003); Hessen et al. (2008); Hill (2005); Klepper & Roth (2005); Raine (2005); Sirfy (2007); Sitrin, Tamar, & Robinson (2006); Winn (2008).
Wiki & File Sharing Life Cycle
Wikipedia: +13 million-plus users.

From Chou, Hunt, Beckjord, Moser, & Hesse (2009); Hanson et al. (2008); Hill (2005); Kirkpatrick & Roth (2005); Raine (2005); Sirfy (2007); Skiba, Tamas, & Robinson (2006); Winn (2009).

The life cycle of file sharing from 2005-2010

2005
- 9 million videos are watched per day in December
- the first YouTube video is uploaded April 23

2006
- 101 million YouTube videos are watched each day in July

2007
- 49% of U.S. Internet users 18 years and older upload videos on the Internet

2008
- 15 hours of YouTube videos are uploaded each minute in January
- 13 hours of YouTube videos are uploaded per minute in January
- 4% of U.S. Internet users 18 years and older post their own videos online in June
- 9% of U.S. Internet users 18 years and older watch or download videos online in June

2009
- 7 million views a day in YouTube
- 16 hours of video are uploaded a minute on YouTube in March
- Wikipedia has 13 million plus registered users and more than 3 million English articles
- Wikipedia is larger than Encyclopaedia Britannica

2010
- MySpace has about 8.2 million unique visitors in July
- 99% of U.S. Internet users are on social networking sites

Social Networking Life Cycle
Twitter is the most popular word in the English language in 2010.

From Bunz (2010); Bush (2009); Chou et al. (2009); Clean Cut Media (2009); Facebook (2010); Freiert (2007); Global Language Monitor (2010); Hansen et al. (2008); Kennedy (2009); Lenhart (2009); Nielsen (2006); Ostrow (2010); Owyang (2008); Saleem (2010); Schroeder (2010); Wauters (2010).

The life cycle of social networking from 2005-2010

2005
- MySpace has 110 million active users in January
- Facebook users are at approximately 120 million in November
- The number of active Facebook users reaches 55 million in November
- 25% of U.S. Internet users are on social networking sites

2006
- MySpace grows to 16 million unique visitors in July, a 130% increase since 2005

2007
- MySpace radio first in the same time spent on a social networking site in June
- Facebook users are at approximately 1.1 billion

2008
- MySpace has 125 million users by December
- Facebook has 400 million users
- Facebook’s revenue is nearly $1 billion
- New visitors to Facebook reaches 75,000

2009
- There are approximately 500 million users on Facebook
- 60% of Facebook members log onto Facebook each day, each user has approximately 120 friends
- Facebook reaches 600 million by November
- The 100 million users are on Facebook

2010
- The most popular word in the English language is Twitter
Web 2.0 and Age
Adult usage is growing over time.

U.S. Internet Users (2008)

- **Adult Usage Growing**: From January 4 to July 4, 2009, Americans 55 years and older using Facebook grew by 514% vs. only 5% among those ages 18-24 years (Schroeder, 2009).

In November 2009, the 3rd visited site by American seniors 65 years and older. A year prior, it was the 45th visited site (Parr, 2009).

Engagement

*Reasons for Web 2.0 engagement: News, entertainment, and health information seeking purposes*
Web 2.0 Segmentation
Internet users can be segmented based on their Web 2.0 behaviour.

Internet use and engagement

Social Media Interests
Users frequent social networks for different reasons.

Social networking site information seeking traffic in 2010

<table>
<thead>
<tr>
<th>Traffic Generated (based on 237,090 impressions)</th>
<th>Twitter</th>
<th>MySpace</th>
<th>Facebook</th>
</tr>
</thead>
<tbody>
<tr>
<td>News</td>
<td>47%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Video Games</td>
<td>4%</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Celebrity/Entertainment</td>
<td>10%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Community</td>
<td>10%</td>
<td>9%</td>
<td>17%</td>
</tr>
<tr>
<td>How-to/Do-it-yourself</td>
<td>4%</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Business/Law</td>
<td>10%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movies</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td>10%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>23%</td>
<td>23%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

From Grove (2010).
Web 2.0 E-Patients
E-patients seek and create health information online.

U.S. Internet Users
• **Web 2.0, a Health-Information Tool:** 61% of American adults are e-patients (Fox & Jones, 2009).

• **Sites Visited:** Wikis (21%; e.g., FluWiki), social networks (6%; e.g., PatientsLikeMe) video sharing (5%; e.g., YouTube), blogs (4%; e.g., DiabetesMine; Sarasohn-Kahn, 2008).

• **Seek and Create Information:** Among 39% of e-patients who used a social networking site in 2008 (Fox & Jones, 2009):
  • 22% followed friends’ health activity
  • 15% posted a health comment, question, or information
  • 12% actively found health information
  • 6% started or joined a health group

56% of e-patients state online health information directly changed their approach to maintaining their health.

Dependency
Web 2.0 sites may result in dependency or addictive behaviors.

Facebook Usage among American Women 18-34 Years
- 63% use Facebook for networking and career purposes
- 57% believe they talk to people online more than face-to-face
- 39% consider themselves to have a Facebook addiction

- 24% make Facebook the first thing they do when they wake up (before brushing their teeth or going to the bathroom)
- 21% check Facebook in the middle of the night

From Parr (2010b)
Theory

Limited published literature to explain why some audiences are more likely to adopt and diffuse Web 2.0 technologies.

- **Theories of Age Categorization:**
  - iGeneration born in 1983-2000 are the first to adopt Web 2.0.
  - Savvy with technology as a result of growing up around it (e.g., mobile phones, computers, and the Internet; Luck and Mathews, 2010).

- **Traditional Approaches:**
  - Traditional adoption/diffusion theory are also been used (e.g., Roger's theory of innovation; Rogers, 2003).
  - The younger the audience, the more likely they are to adopt (Kitteson, 2009).
Key Findings: Overall Implications

Research Implications

1. **Tremendous Potential**: Strategies will (or can) be wide-reaching. To remain competitive, Web 2.0 may need to be considered as a way to reach key target markets.

2. **Two-Way Communication**: Strategic planning is essential to determine the sites audiences are using and the strategies they are influenced by. Sites may include Blogger.com, LinkedIn, Facebook, Wikipedia, etc. Strategies may include: blogger reach, getting target audiences to create a wiki discussion, encouraging video sharing, and enabling content creation (e.g., videos; pages, groups, and forums on popular social networking sites).

3. **Age**: Web 2.0 is no longer used solely by youth.

4. **Information Conveyed**: If using entertainment, MySpace may be a good platform. For news or information, Twitter may be an ideal platform. For online health information: wikis, social networks, video-sharing sites, and blogs may be considered.

5. **Theory**: Future research needed on Web 2.0 behaviors and user characteristics (e.g., age, culture, gender, and psychographics) using theoretical models.

6. **Risks and Cautions**: May need to be carefully monitor relationship between social-media dependency or addiction and negative health outcomes. Practitioners also lose an element of content control/dissemination over Web 2.0 messaging. Also, digital divides still exist.

“The Internet will dwarf that of the most important cultural influence of the past 50 years, television. Potentially the Internet represents change on the order of the industrial revolution or the printing press.”

– World Internet Project
Questions?

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