Crowdsourcing 101: A Few Basics to Make You the Leader of the Pack

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Health Promot Pract 2013 14: 163 originally published online 8 January 2013
DOI: 10.1177/1524839912470654

Crowdsourcing 101: A Few Basics to Make You the Leader of the Pack

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Crowdsourcing is a problem-solving approach that taps the knowledge, energy, and creativity of a global, online community. Like marketing, crowdsourcing originated and continues to evolve in the private sector. Health communicators and social marketers can use crowdsourcing across the research-development-dissemination process. This article provides an overview of crowdsourcing and how it can be used to speed up and enhance social marketing and health communication. Nielsen's 1/9/90% model is presented as a guide for engaging appropriate crowds for tasks throughout the development process. The four Fs that motivate online contributors—Fun, Feeling good (fulfillment), Fame, and Fortune—are also presented as ways of incentivizing crowd engagement and matching the incentive to the task at hand. Crowdsourcing resources, such as curating agencies, websites, and crowd labor markets, can be tremendous force multipliers. If done strategically, crowdsourcing has the promise of giving well-researched and creative social marketing results for less money and in less time than traditional methods.

Keywords: *health education; health promotion; health research; qualitative research; social marketing/health communication; audience/consumer analysis; segmentation; Internet/electronic interventions; technology*

INTRODUCTION

Crowdsourcing offers a potential solution to practitioners faced with a gap between their health communication strategy needs and what their budget and time line can afford. Crowdsourcing is a way of engaging lots of individuals with different talents, knowledge, and perspectives, solicited through online communities, in the creation and dissemination of products, services, and messages for public health.

Definitions and Origins of Crowdsourcing

Crowdsourcing was originally defined by the *Wired* journalist and Northeastern University journalism professor Jeff Howe (2006) as "the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an *open call*." An open call is an audition for talent (think Broadway's *A Chorus Line*) or a request for proposals (RFP), with

Health Promotion Practice
March 2013 Vol. 14, No. 2 163–167
DOI: 10.1177/1524839912470654

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few restrictions on who may respond. As any actor or dancer will attest, hundreds of people show up for one part. The idea is to open the competition in hopes of finding great, undiscovered talent in the crowd, but many people show up who are not appropriate for the part. The same principles of inclusiveness and search for unknown talent motivate open-call competitions by companies, agencies, and nonprofit organizations. The same downside also exists. Identifying something really good can be like searching for a needle in a haystack. As discussed below, there are strategies and resources to help reduce this disadvantage while increasing your chance of success with crowdsourcing.

Crowdsourcing in the Public Sector

In September 2009, President Obama released his Strategy for American Innovation, which called for agencies to be more innovative through the use of prizes and challenges. In September 2010, the U.S. General Services Administration launched Challenge.gov; and in January 2011, the President signed into the law the America COMPETES Reauthorization Act. This gives all agencies the broad authority to conduct prize competitions to spur innovation, solve tough problems, and advance their core missions (Office of Management and Budget, 2010). The Executive Office of the President of the United States, U.S. Office of Science and Technology Policy (2012) identified numerous benefits of open call competitions, citing a very low risk to reward ratio. Competitions allow groups to establish an ambitious goal without strict terms of reference, move beyond the "usual suspects," and bring in new thinking and out-of-discipline perspectives. The report concludes that open-call competitions allow public agencies to increase their effectiveness and maximize the return on taxpayer dollars.

Forms of Crowdsourcing

Particularly for organizations whose resources are constrained, crowdsourcing is a fresh approach worth trying. How does it work? The first step is to determine the kind of crowdsourcing you need. A good place to start for a general overview is crowdsourcing.org, which was the starting place for writing this article. Four types are described here: crowd funding, crowd labor, crowd research, and creative crowdsourcing.

Crowd funding ("Yes, Virginia, There Is a Santa Clause"). Crowd funding sites use the open call to raise money for new and innovative ventures. Kickstarter.com is a platform explicitly for creative projects, such as producing video, books, and comics. Individual donors contribute various amounts of money, but through the power of the crowd, eventually the desired amount is raised. For organizations working with freelance artists or creative providers, this might be a viable option to get things started. GoFundMe.com can be used to raise money for just about anything, but it appears to be mostly used by individuals trying to recoup from a loss or achieve a short-term goal.

Crowd labor. In crowd labor, individuals are recruited to perform specific tasks, from very small and simple to more complex, through online "labor markets" such as Crowdflower or Amazon Mechanical Turk. Human beings, and lots of them, are still necessary to perform tasks requiring cultural or societal judgment, as well as those requiring certain skills. To use these sites, a labor requestor (e.g., your agency) posts the job's requirements, possibly develops a test for appropriate skills, sets the level of compensation, and states the deadline for completion of tasks. People with the skills to perform these tasks sign up through the coordinating site. Examples of crowd labor that lend themselves well to health communication tasks, particularly in the era of social media, include the following: sentiment analysis, for example, judging the attitudes and values expressed in tweets; identifying and coding content in larger exchanges; staffing hotlines or "warm" lines (where callers leave a message and it is returned within a short period); and translating and simplifying language in publications. Some tasks vetted through crowd labor, such as language translation, require specialized skills and knowledge. Organizations generally rely on crowd labor for tasks that are repetitive and labor intensive, can be broken down into smaller tasks, and cannot be left to computers. Crowd workers are able to earn money in a convenient manner. It is up to the requesting agency to decide if the results are sufficient for its needs.

Crowd research. In social marketing and health communication, gathering insights from intended audiences is essential. Crowdsourcing offers several ways to gather input very quickly and cheaply. The most common format is through voting, made popular by television programs such as *American Idol*. This form of crowd research commonly asks an audience to vote on user-generated ideas or ads to determine the crowd's favorite. The process needs to be managed in order to prevent some individuals from unduly influencing the vote. And even well-implemented crowd voting induces a system-

atic self-selection bias (Brabham, 2010). Crowd voting is better thought of as a form of generating awareness and engagement than as a true market research technique.

There are other forms of crowd-based research that produce more authentic results to inform social marketing and health communication programs. The French company eYeka conducted exploratory qualitative research with a contest seeking visual representations about personal beauty care in China. The narrative for the contest—and we feel this creative element is essential—featured an American female student traveling to China who wanted to learn about cosmetics and how they were used. Both men and women submitted a variety of examples revealing key insights about Chinese attitudes and behavior regarding beauty care (Liepuoniute, Pétavy, Cere, & Roth, 2011).

Finally, market research online communities (MROCs) might be the antidote to focus groups and have some of the same strengths (and weaknesses) as research panels. MROCs are used primarily for the purpose of gathering independent feedback, listening to consumers and exploring some topics in depth. An organization may establish an MROC as a password-protected website where a specific group of people is recruited to take part in daily, weekly, or monthly research activities around a shared topic of interest. You could easily engage different audience segments by factors as such gender, language, and health concerns through different online communities. If you already have a social media site, such as a Facebook page or Twitter following, or an online site where, for example, new mothers or persons living with a specific illness interact, you have a way of recruiting individuals into an MROC. Or, you can work with a vendor to do the recruiting, hosting, and management for you.

Like focus groups, MROCs allow hosts to have a conversation with the participants and explore topics in depth. Like consumer panels, hosts are able to go back to the same people repeatedly over a specific period of time. An MROC project can have 50 to 500 participants and be accomplished in a week, if desired. The average cost for running an online research community through a vendor for one month is $5,000.

Creative crowdsourcing. Long before the term *crowdsourcing* or even the *Internet* existed, Pillsbury was running the *Bakeoff* to engage consumers in the brand, generate public awareness, and identify creative uses of their products. This and other consumer contests were forerunners of today's creative crowdsourcing.

Creative crowdsourcing has become the proverbial sliced bread—the latest and greatest when it comes to generating new products, services, or promotional ideas directly from consumers. The approach is the same in both the private and public sectors. A problem, or creative brief, is posted online, and Internet users are challenged to respond with their best work. Here's where the worlds begin to diverge. In the private sector, entries number in the thousands, the winning ideas are awarded substantial prizes (e.g., "See your work broadcast on the Super Bowl;" win $100,000; get a job), and the company uses the ideas for its own gain (Brabham, 2008, p. 76). In the public sector, government agencies that have tried the approach are largely pleased with their results but admit there was quite a bit of work involved in reviewing and selecting winners. By following some of the tips below, we can do even better.

Tips for Getting Even Better Results From Creative Crowdsourcing

Through crowdsourcing, organizations can access a potentially global talent pool in a matter of weeks at relatively low cost. One problem is that the results from a purely open call are not guaranteed to be useful. Below are two theories, one strategy, and several resources to aid practitioners in working more efficiently.

Theory 1: The 90/9/1% rule. Danish usability guru Jakob Nielsen developed the 90/9/1% rule after studying online contributions to user-generated content sites such as *Wikipedia*. Nielsen observed that in most online communities, 90% of users read or observe but do not contribute—he called this activity "lurking;" 9% of users contribute from time to time; and 1% of users participate a lot and account for most contributions. The formal name for this phenomenon is *participation inequality* (Hill, Hollan, Wroblewski, & McCandless, 1992). Although the 90/9/1% rule is frequently challenged, it seems to hold up in "unprompted" user-generated sites.

Theory 2: The Four F's of motivating co-creation. The Four Fs of creative crowdsourcing grew out of Yannig Roth's (2011) extensive research for eYeka, a French crowdsourcing company. Roth identified four motivations for participation in online crowdsourcing: Fun, Fulfillment, Fame, and Fortune (Box 1).

Strategy: The Crowdsourcing "Bow Tie" for Health Communication and Social Marketing

Imagine health communication as a process from formative research to development to dissemination. The *kind of crowd* you want to engage depends on where you are in the process. This can be imagined as a bow tie in terms of your engagement of the 90%, 1%, 9%, and again 90% (or 100%) of a crowd (see Figure 1).

BOX 1
The Fantastic Four Motivations for Co-creation

1. *Fun*: The fun factor is crucial to the success of an online creative campaign. *You probably won't engage anyone if your subject is boring.* Fun similarly motivates crowd labor tasks, as well. This is an area where public health risks failure unless it brings some creativity to its challenge. (See the Chinese beauty product example above.)
2. *Fulfillment*: The second most important motivation of co-creators is to *perform something that benefits society and allows someone to feel good about his or her contribution.* Health promotion has an advantage here but only if the fun factor is also kept in the mix.
3. *Fame*: Some co-creators have their 15 minutes of fame, as in trending on Twitter. But more than actual fame, *co-creators are motivated by recognition* from both their peers and the brand or organization.
4. *Fortune*: If the other factors are low, there'd better be money.

SOURCE: Roth (2011).

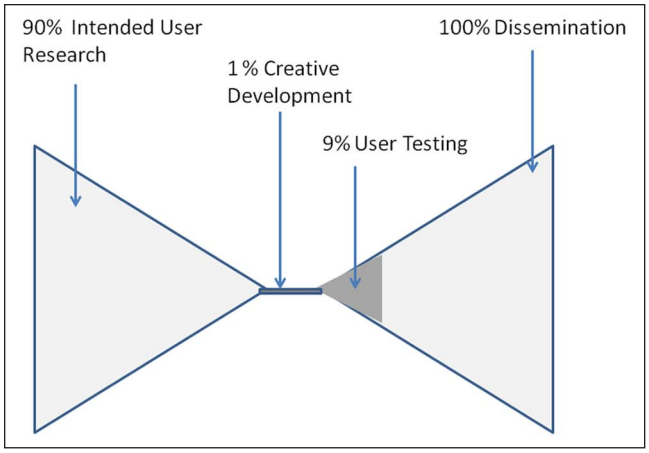

FIGURE 1 The Crowdsourcing "Bow Tie" for Health Communication

Representative answers are needed at the beginning of a project. These answers will come from the 90%, or the people who want their problems solved and for whom you are developing your product or message. As the project moves into development, it is time to tap into the *creative 1%* to come up with the concepts and creative interpretations. Finally, reach out to the *9% of enthusiasts* to refine and test these ideas. For dissemination, you again want to work through networks reaching the 90%, possibly also engaging the enthusiastic 9% as intermediaries.

Finding the Right Crowd for the Right Job

The representative 90% can be found in online communities and social media sites around specific topics of interest, for example, an online support group for a specific disease or a *mommy blog* site for breast-feeding moms. The 9% of enthusiasts can be found in more motivated user groups or professional associations and tapped when you want to engage people with some experience who can really test whether your concept or draft materials will work for their clients or patients.

Finding the *1% of creative talent* can be more challenging and time-consuming when using the open call. Health communication practitioners, especially those in the public sector, do not have the time to sift through tons of bad work. Traditional advertising agencies can do crowdsourcing, but several new kinds of business models have emerged to provide a valuable service. Virtual knowledge brokers or *crowdsourcing curating agencies* exist to facilitate the exchange between a client organization and the appropriate crowds. In particular, they gather, host, and interact with crowds representing the different skills and perspectives required (this is where the curating comes in), and they have the technical infrastructure, online tools, and knowledge to identify and manage high-quality media inputs. ChallengePost, which hosts challenge.gov, is one such company. There are many other vendors working globally who can be tapped for a fee. For a comprehensive overview of such vendors see *Forrester Research's Forrester Wave™: Co-Creation Contest Vendors, Q3 2011* (Williams, 2011).

CONCLUSION

Crowdsourcing can speed up and enhance your health communications. To be effective, practitioners need to find the right crowds to review and respond to their work. Successful initiatives form or engage online communities of like-minded people with tasks that motivate the 1% that are creative, the 9% that are enthusiastic, and the 90% that are likely to benefit from the project. Crowd labor can be recruited to help manage social media and other large-scale tasks that can be broken into smaller units. Finally, either on your own, through Challenge.gov, or with intermediary vendors for research and creative, tapping the power of the online world can bring fresh energy to your health communication and social marketing programs.

REFERENCES

Brabham, D. C. (2008). Crowdsourcing as a model for problem solving: An introduction and cases. *Convergence*, *14*, 75-90.

Brabham, D. (2010). Crowdsourcing [Web log post]. Retrieved from http://dbrabham.wordpress.com/crowdsourcing/

Executive Office of the President of the United States, U. S. Office of Science and Technology Policy. (2012). *Implementation of federal prize authority: Progress report*. Retrieved from http://www.whitehouse.gov/sites/default/files/microsites/ostp/competes_report_on_prizes_final.pdf

Hill, W. C., Hollan, J. D., Wroblewski, D., & McCandless, T. (1992). Edit wear and read wear. In Proceedings of CHI'92 SIGCHI conference on human factors in computing systems, Monterey, CA, May 3-7, 1992 (pp. 3-9). New York, NY: Association for Computing Machinery.

Howe, J. (2006, June). The rise of crowdsourcing. *Wired*, *14*. Retrieved from http://www.wired.com/wired/archive/14.06/crowds.html

Liepuoniute, I., Pétavy, F., Cere, J., & Roth, Y. (2011, June). *Using co-creation to conquer the Chinese cosmetics market* (eYeka White Paper). Retrieved from http://www.crowdsourcing.org/document/using-co-creation-to-conquer-the-chinese-cosmetics-market/5778

Office of Management and Budget. (2010). *Guidance on the use of challenges and prizes to promote open government* (Memorandum for the heads of executive departments and agencies). Retrieved from http://www.whitehouse.gov/sites/default/files/omb/assets/memoranda_2010/m10-11.pdf

Roth, Y. (2011, February 23). *Fantastic Four motivations for co-creation [Web log post]*. Retrieved from http://news.eyeka.net/2011/02/fantastic-four-motivations-for-co-creation/

Williams, D. (2011, September 7). *Forrester Wave: Co-creation contest vendors, Q3* 2011 [Web log post]. Retrieved from http://blogs.forrester.com/doug_williams/11-09-07-forrester_wave_co_creation_contest_vendors_q3_2011