



STUDY MATERIAL ON CROWDSOURCING

A Research Workshop on start-up policies of 15 states of India using crowdsourcing as a Research
Tool



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The More the Merrier: Using Crowdsourcing for Your Content Marketing Efforts

While the concept of relevance has always driven successful marketing efforts, it is a core requirement for effective marketing in today's cluttered and hypercompetitive marketplace. In fact, the entire premise of all search engines is determining the relevance of any one website to a submitted search query, and matching it with the searcher.

Crowdsourcing has served as a premier method for gathering relevant content for centuries, although the actual term for this process wasn't coined until 2006 by Jeff Howe in a Wired magazine article. The British used an early crowdsourcing effort when established a prize in the 1700s to seek suggestions for measuring a ship's longitude. Another British effort produced the original Oxford English Dictionary, and crowdsourcing has been to improve the OED for over a century.

Combining a Proven Concept with New Technologies

In spite of the past use of crowdsourcing, it has only taken off as a significant and effective tool with the advent of the Internet and global communications. The Oxford English Dictionary editors could only rely on letters and cards mailed from contributors throughout the British Empire. In the mid-20th century, Pillsbury could only use the postal service to collect recipes for its calendar and cookbooks. However, the basic premise these approaches validated is that content from interested individuals will produce an involved and engage a community of users.

For modern business owners and managers, there has never been as inexpensive and powerful a tool for developing content for their users as that found in crowdsourcing. Understanding and utilizing this tool will position a business as an authority figure centered among a group of engaged customers. With such insights, various strategies for using crowdsourcing will produce relevant and proprietary content.

There are numerous examples of companies creating content today through crowdsourcing techniques. Many large companies such as Coca-Cola and General Mills have pioneered the use of modern crowdsourcing approaches. However, many businesses, regardless of size, can now take advantage of the same concepts and methods. Several examples of successful strategies include:

Strategy #1 - Using Social Media to Crowdfund Your Content

With active participation from followers, a company can solicit and collect a wide range of information and contributions on topics relevant to its market space. This material allows the creation of proprietary intellectual property and an ongoing process of engagement and entertainment. For example, TourBeat is establishing itself as an authority on the finances of touring within the music industry.

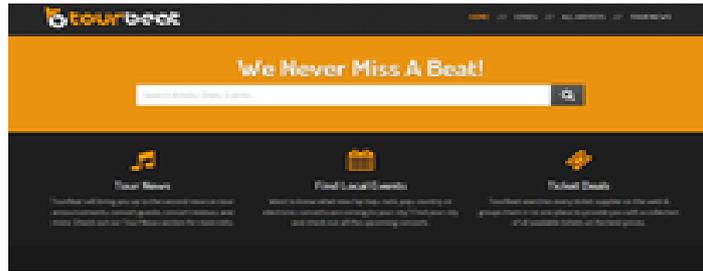


Image via TourBeat

TourBeat has launched an effort to produce a collection of information and insights related to the music industry. The company seeks to produce an eBook and web archive of material that details the knowledge and experience of people involved in the industry.

"TourBus Economics" is compiled from submissions solicited on its website and through other media. Internal editors will evaluate and organize the material into usable content. While the immediate objective is to produce a finished product, the project will actually continue as an ever-expanding archive of information from and experiences of industry participants.

Originally launched in December of 2014, TourBeat aims to bring customers the latest news when it comes to tours and concerts by creating an "IMDB" type site dedicated to concerts. They also provide the service of searching for concert tickets from different providers from around the web in one place so customers can search to find the best seats at the best price all service fee free.

Application: Consider a special area of experience and participation in your industry that is of interest to all participants. Create a project, contest, or community of contributors who will provide the personal content to create a worthwhile final result in a pre-defined area of focus. Note this allows repurposing of the content in multiple forms and media.

Strategy #2 - Allowing Others to Provide Content and Create Value on Your Site

Of course, the Internet has produced one of the one of the most used and visible crowdsourcing projects in history with the creation of Wikipedia.



Image via Wikipedia

Thousands of individuals have provided and continue to generate information accessed by millions to create a broad base of relevant information. While virtually anyone can submit information to the site, the real crowdsourcing value comes from a large base of volunteers who are responsible for vetting and moderating the massive amount of information.

Surprisingly, this project is more a large small business than a corporate undertaking, all thanks to the power of crowdsourcing.

Application: Different from the TourBeat example, your industry may have the need for an on-going point of information and reference that will create a broad following. While it certainly doesn't need to be as broad as that of Wikipedia, you can create the authority position by creating and managing the site.

Strategy #3 – Using Your Followers as a Source of R&D and Market Research

With active social media participation, it is possible to conduct a great deal of research from actual and potential customers, moving one step closer to realistic and actionable data. Lay's found great success when it used crowdsourcing to seek ideas for new flavors of its product.



Image via Lay's

The “Do Us a Flavor” campaign, this effort at crowdsourcing is calling on consumers to submit ideas for new potato chip flavors. The company created a Facebook page app and allows interested participants to easily submit their ideas and creations. Further increasing participation, the company then allowed their Facebook fans to vote on the top suggestions, with the winner receiving a prize of \$1 million or 1 percent of the new chips first year's sales, whichever was greater. An added bonus for Lay's was the heavy media coverage of the process, generating a great deal of unpaid advertising.

Application: Depending on your product or service, it may make a lot of sense to turn to your market space to seek feedback on product modifications, changes and new introductions. Make the effort innovative, fun and creative to gain both increased participation and greater market visibility.

Strategy #4 – Use Crowdsourcing to Make Wise Strategic Decisions and Changes

The two-way nature of crowdsourcing is one way to break down corporate silos and combat management's ivory tower syndrome. When it came to choosing a more relevant company name, Pixily found a winning strategy.

Pixily. What is more relevant to your customers than your company name? When this small document scanning and management company decided it needed a more powerful brand, starting with its name, it turned to both employees and customers for the process. The company eschewed the use of a professional branding company or an internally-driven management project. Instead, it used a process of contacting and asking for input from those who relied on the company, and ended up with the new name, OfficeDrop.

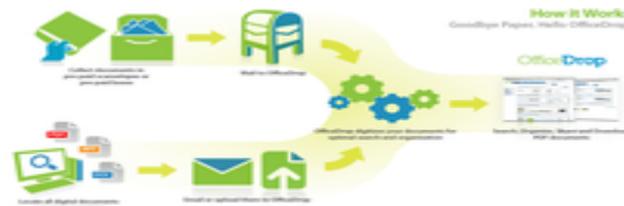


Image via neuro-designs

The company used a three-phase process that started with a company-wide brainstorming process. With the roughly 100 names this produced, the second step narrowed the list to 30 possible. Then, this list was whittled down by online checking and more voting. The final 10 names were then introduced to customers via a detailed email and survey, with a record high open and participation rate. The process not only produced a new name, it generating a new level of interaction between employees and customers.

Application: If your firm is faced with changes or new directions dictated by changes in your market, you can smooth the eventual process – and avoid some potential pitfalls – by using a crowdsourcing approach. Whether it is a new name, brand, or even a new product line, involving both customers and employees will produce far more actionable input than you might get from a traditional third-party research effort. In some cases, it will make sense to combine both efforts to produce the optimal results.

Conclusion

If you are a business seeking increased relevance in your market space and engagement with your customers and employees, you have new options with crowdsourcing. These and other strategies may provide you with a number of innovative solutions to your various needs and challenges. When it comes to content, you can be assured of high relevance when your employees, customers and clients are involved in the process of generating that content.

The Original Crowdsourcing Project: The Oxford English Dictionary

The idea of crowdsourcing has really come to the fore in the last decade or so in the online age. Crowdsourcing is beneficial to both parties involved in a project. Crowdsourcing gives the average person the ability to take part in interesting studies while the project manager can get all the data they need from the participants. This research technique has been used to track stars and planet and to build a database of world landmarks. It goes to prove that with more people comes more success. Perhaps the first ever case of crowdsourcing helped create on the leading English institutions, the Oxford English Dictionary.

In the 1850's, a group of scholars known as the Philological Society decided to create a new dictionary to celebrate the reign of Queen Victoria. This dictionary became the Oxford English Dictionary and is now the standard authority on the English language. Not many people know, however, the fascinating history behind the dictionary and how it was created.

The reason they wanted to create a new dictionary was because the dictionary around at the time, written by Samuel Johnson in the 1700's, only contained 43,000 words, with definitions that showed his prejudiced opinions. Some of the funniest and prejudiced definitions included:

Oats – A grain, which in England is generally given to horses, but in Scotland supports the people.

Dull – Not exhilarating; not delightful; as, to make dictionaries is dull work.

Excise – A hateful tax levied upon commodities, and adjudged not by the common judges of property, but wretches hired by those to whom excise is paid.

Far-fetch – A deep stratagem. A ludicrous word.

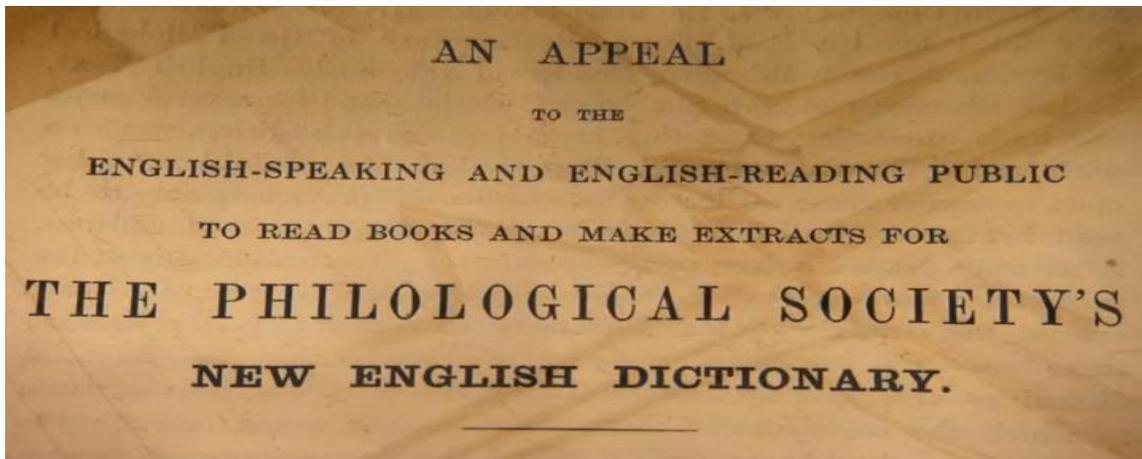
Lexicographer – A writer of dictionaries; a harmless drudge that busies himself in tracing the original, and detailing the signification of words.



Samuel Johnson who created his own dictionary.

Although it lasted for over 100 years, this dictionary needed improving. It wasn't until James Murray became editor of the Oxford Dictionary in 1879, when the real work started. James Murray was a school teacher with no degrees, although it is said that he taught himself 40

languages, making him a great leader of the project. The reason the project moved on so much under James was because he knew that the undertaking needed much more organisation and resources than had been given it.

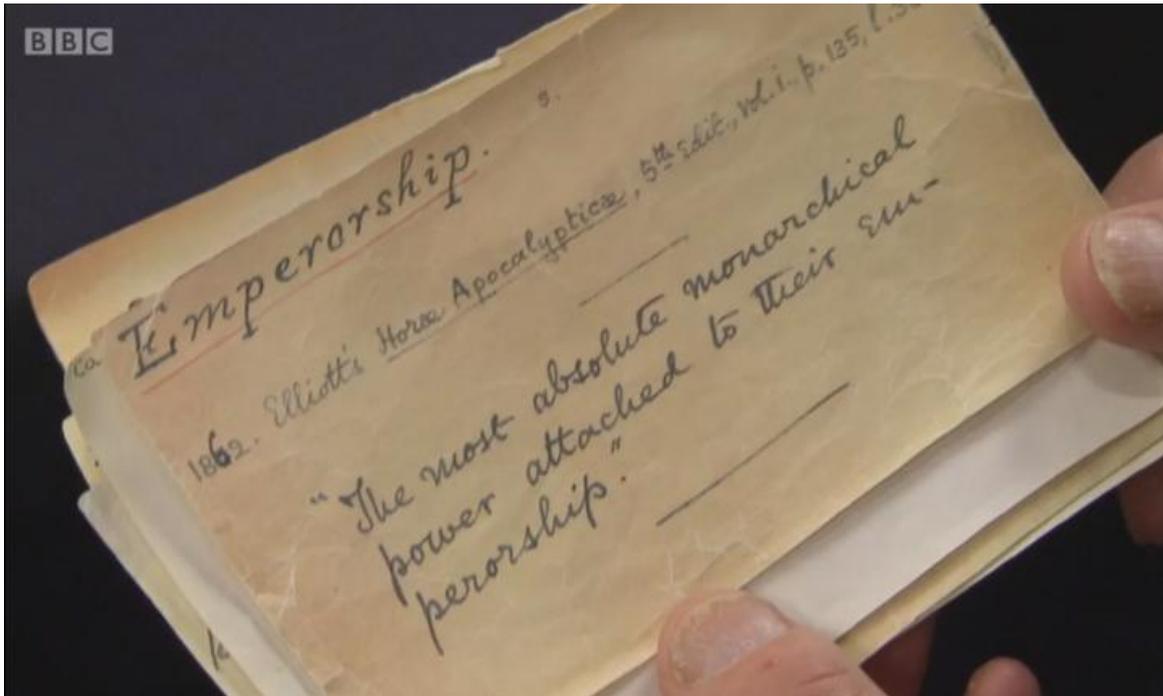


Oxford English Dictionary Newspaper Advert



Sir James Murray at Work

James' big idea was to advertise in newspapers distributed to bookshops and libraries for readers of the English language. He wanted these readers to read books, and then send extracts of these books that contained a word that needed defining. James wanted these people to scour every piece of written text for any word that could be defined; these books included scientific journals, song sheets, recipe books, and medieval literature. At its peak, Murray was receiving over 1000 quotations a day from various contributors, which he then stored in his shed. The easy work was collecting the slips of paper with the words on, the harder part was verifying and checking each book that contained the word to make sure they were using it accurately. Over 3,000,000 slips of paper with references arrived at Murray's location, all that needed checking and then storing in his shed.



example of one of the reference slips sent in by the public.

After 5 years the dictionary only went from A to Ant. Unfortunately, James died by the time the dictionary had reached the letter T in 1915. James expected the dictionary to take 10 years and be contained in 4 volumes, but when it was finished in 1928, it took over 40 years, spanned 12 volumes, and contained over 414,000 words. 1,827,306 of the estimated 3,000,000 references were used, making it truly the “people’s dictionary.” The crowdsourcing still happens today, as each month 100 new entries are suggested to the staff of the dictionary for inclusion in future editions.

Toyota Holds Eighth Dream Car Art Contest Awards Ceremony

Toyota Motor Corporation held an awards ceremony for the eighth Toyota Dream Car Art Contest at Mega Web, Toyota’s vehicle experience facility in Tokyo’s Koto Ward on August 27. A total of 662,898 art works from 75 countries and regions were submitted to the contest. In each of three age categories (seven and under, eight to 11, and 12 to 15), one Gold, two Silver, three Bronze, and four Best Finalist awards were presented. In addition, one entry was selected for the special President Toyoda Award. The award ceremony was attended by the 31 award winners and their parents and guardians, representing 22 countries and regions.

The Gold award winners were Thanh Mai Bui (age 6) of Vietnam for "Super Crab Car", Jirawat Yodsing (age 10) of Thailand for "Wat Pho Massage Car", and Iasmina-Maria Raceanu (age 16; 15 at the time of submission) of Romania for "STORYOTA". Mealaksey Pha (age 5) of Cambodia won the President Toyoda award for "Smart Fish Car".

Conducted as part of Toyota's social contribution activities, the Toyota Dream Car Art Contest is open to children 15 years of age and below worldwide. The contest, first conducted in 2004, gives children throughout the world the opportunity to develop an interest in cars and helps them feel the joy and importance of having a dream.

Local contests were held from October 2013 through March 2014, with 670 outstanding entries selected to progress to the world contest held in Japan. TMC President Akio Toyoda led a jury consisting of outside experts in art and automotive science in selecting the winners.

KODAK EASYSHARE

Gallery Launches Photo Contest in Support of Olympic Sponsorship; Four Best 'Gold Medal Moment' Story Submissions Win One-week Trip to The Torino 2006 Olympic Winter Games

KODAK EASYSHARE Gallery announced today its 'Go for the Gold' photo contest to give away four six-day trips to Torino, Italy for the Torino 2006 Olympic Winter Games. The contest is currently running and is open to anyone to submit a picture and story of their greatest personal 'Olympic moment' from scoring the winning goal on a recreational soccer team, to finishing a community-building-project.

In addition to an all-inclusive trip to the Torino 2006 Olympic Winter Games, the four grand prize-winners will receive a KODAK digital camera and serve as on-site Olympic reporters for the KODAK EASYSHARE Gallery. Winners have access to some of the best Olympic venues and will tell the story of their trip to the world in their own personal web page right from the KODAK EASYSHARE Gallery premier service in the KODAK 'Live from Torino' promotion in February 2006.

"Gold medal moments and inspiring stories happen every day," said David Rich, vice president, marketing and channel sales, Kodak Imaging Network, Inc. "This contest gives people the ability to share their personal triumphs with the world and a chance to combine photography and storytelling to participate in one of the greatest sports events of all time - the Olympic Games."

Why YouTube or Delicious are not Crowdsourcing?



Traditionally, crowdsourcing has been linked to certain internet platforms like YouTube and Delicious, for example. This relationship arises from the fact that all these platforms involve a lot of users, a crowd, that focus their efforts in creating content (User Generated Content – UGC).

However, it is important to note that these types of platforms, from my point of view and after an objective analysis, are not crowdsourcing per se (although they may be used for this purpose).

The reasons for this (possibly) controversial claim are two.

One. These platforms offer a service: online video storage, online bookmark storage, etc. To enjoy this service, users must not perform any task, excluding the task related to the register process. Therefore, there is not a reward, there is a service offered free to any user.

Two. Crowdsourcing initiatives are characterized by using an open call to perform a particular and clearly defined task. The open call implies to “cite, call one or more people [...]”. It can be observed that none of the two platforms make this kind of call (which doesn’t mean that they don’t advertise their services in different ways). Moreover, neither “Broadcast yourself!” (YouTube) or “Discover yourself!” (Delicious) can’t be understood as specific clearly defined tasks.

Despite this reasoning, it is important to note that both platforms can well be used as a platform for crowdsourcing. In the case of YouTube, for example, it can be used to upload videos created by users for a contest. In the case of Delicious, if a crowdsourcer proposes a micro-task consisting in the search of certain types of websites, those can be bookmarked on the Delicious social bookmarking system.

Crowdsourcing in Astronomy

Crowdsourcing in Astronomy was used in the early 19th century by astronomer Denison Olmsted. After being awakened in a late November night due to a meteor shower taking place, Olmsted noticed a pattern in the shooting stars. Olmsted wrote a brief report of this meteor shower in the local newspaper. “As the cause of ‘Falling Stars’ is not understood by meteorologists, it is desirable to collect all the facts attending this phenomenon, stated with as much precision as possible,” Olmsted wrote to readers, in a report subsequently picked up and pooled to newspapers nationwide. Responses came pouring in from many states, along with scientists’ observations sent to the American Journal of Science and Arts. These responses helped him make a series of scientific breakthroughs, the major being that meteor showers are seen nationwide, and fall from space under the influence of gravity. Also, they showed that the showers appeared in yearly cycles, a fact that often eluded scientists. The responses allowed him to suggest a velocity for the meteors, although his estimate turned out to be too conservative. If he had just taken the responses as presented his conjecture on the meteor’s velocity would have been closer to their actual speed.

A modern-day version of crowdsourcing in astronomy is NASA’s photo organizing project which asks internet users to browse photos taken from space and try to identify the location the picture is documenting.

Crowdsourcing in Journalism

Crowdsourcing is increasingly used in professional journalism. Journalists Crowdfund information from the crowd, typically fact check the information and then use it in their articles as they see fit. The leading daily newspaper in Sweden has successfully used crowdsourcing in investigating the home loan interest rates in the country in 2013-2014. The leading daily newspaper in Finland crowd-sourced investigation in stock short selling in 2011-2012. Talking Points Memo in the United States asked its readers to examine 3000 emails concerning the firing of federal prosecutors in 2008. The British newspaper the Guardian crowd-sourced the examination of hundreds of thousands of documents in 2009.

Crowdsourcing in Ornithology

Another early example of crowdsourcing occurred in the field of ornithology. On December 25, 1900, Frank Chapman, an early officer of the National Audubon Society initiated a tradition, dubbed the "Christmas Day Bird Census". The project called birders from across North America to count and record the number of birds in each species they witnessed on Christmas Day. The project was successful, and the records from 27 different contributors were compiled into one bird census, which tallied around 90 species of birds. This large scale collection of data constituted an early form of citizen science, the premise on which crowdsourcing is based. In the 2012 census, more than 70,000 individuals participated across 2,369 bird count circles. Christmas 2014 marked the National Audubon Society's 115th annual Christmas Bird Count.

Crowdsourcing in Genealogy Research

Genealogical research was using crowdsourcing techniques long before personal computers were common. Beginning in 1942, members of The Church of Jesus Christ of Latter-day Saints (LDS Church) encouraged members to submit information about their ancestors. The submitted information was gathered together into a single collection. In 1969 in order to encourage more people to participate in gathering genealogical information about their ancestors, the church started the three-generation program. In this program church members were asked to prepare documented family group record forms for the first three generations. The program was later expanded to encourage members to research at least 4 generations and became known as the four-generation program. Institutes that have records of interest to genealogical research have used crowds of volunteers to create catalogues and indexes to records.

Crowdsourcing in Genetic Genealogy Research

Genetic genealogy is a combination of traditional genealogy with Genetics. With the rise of personal DNA testing, after the turn of the century, by companies such as Gene by Gene, FTDNA, Gene Tree, 23 and Me, and Ancestry.com led to public and semi-public databases of DNA testing which uses crowdsourcing techniques. In recent years, citizen science projects have become increasingly focused providing benefits to scientific research. This includes supporting, organization and dissemination of personal DNA (genetic) testing. Like Amateur astronomy, citizen scientists encouraged by volunteer organizations like ISOGG - the International Society of Genetic Genealogy, have provided valuable information and research to the professional scientific community.

Spencer Wells, Phd., Director of the Genographic Project blurb:

Since 2005, the Genographic Project has used the latest genetic technology to expand our knowledge of the human story, and its pioneering use of DNA testing to engage and involve the public in the research effort has helped to create a new breed of "citizen scientist." Geno 2.0 expands the scope for citizen science, harnessing the power of the crowd to discover new details of human population history.

Crowdsourcing in Public Policy

The first conference focusing on Crowdsourcing for Politics and Policy took place at Oxford University, under the auspices of the Oxford Internet Institute in 2014. Research is emerging that focuses on the use of IT-mediated Crowds for policy purposes. These include the use of Virtual Labor Markets for policy assessment purposes, investigated experimentally.

Governments across the world are increasingly using crowdsourcing for knowledge search and civic engagement. Iceland crowd-sourced their constitution reform process in 2011, and Finland has crowd-sourced several law reform processes.^[37] The House of Representatives in Brazil has used crowdsourcing in policy-reforms, and federal agencies in the United States have used crowdsourcing several years.

Early Crowdsourcing Competitions

Crowdsourcing has often been used in the past as a competition in order to discover a solution. The French government proposed several of these competitions, often rewarded with Montyon Prizes, created for poor Frenchmen who had done virtuous acts. These included the Leblanc process, or the Alkali Prize, where a reward was provided for separating the salt from the alkali, and the Fourneyron's Turbine, when the first hydraulic commercial turbine was developed.

In response to a challenge from the French government, Nicolas Appert won a prize for inventing a new way of food preservation that involved sealing food in air-tight jars. The British government provided a similar reward to find an easy way to determine a ship's longitude in the "The Longitude Prize". During the Great Depression, out-of-work clerks tabulated higher mathematical functions in the Mathematical Tables Project as an outreach project. One of the biggest crowdsourcing campaigns was a public design contest in 2010 hosted by the Indian Government's finance ministry to create a symbol for the Indian rupee. Thousands of people sent in entries before the government zeroed in on the final symbol based on the Devanagari script using the letter Ra.

Modern Methods

Today, crowdsourcing has transferred mainly to the Internet. The Internet provides a particularly good venue for crowdsourcing since individuals tend to be more open in web-based projects where they are not being physically judged or scrutinized and thus can feel more comfortable sharing. This ultimately allows for well-designed artistic projects because individuals are less conscious, or maybe even less aware, of scrutiny towards their work. In an online atmosphere, more attention can be given to the specific needs of a project, rather than spending as much time in communication with other individuals.

According to a definition by Henk van Ess:

"The crowdsourced problem can be huge (epic tasks like finding alien life or mapping earthquake zones) or very small ('where can I skate safely?'). Some examples of successful crowdsourcing themes are problems that bug people, things that make people feel good about

themselves, projects that tap into niche knowledge of proud experts, subjects that people find sympathetic or any form of injustice."

Crowdsourcing can either take an explicit or an implicit route. Explicit crowdsourcing lets users work together to evaluate, share and build different specific tasks, while implicit crowdsourcing means that users solve a problem as a side effect of something else they are doing.

With explicit crowdsourcing, users can evaluate particular items like books or webpages, or share by posting products or items. Users can also build artifacts by providing information and editing other people's work.

Implicit crowdsourcing can take two forms: standalone and piggyback. Standalone allows people to solve problems as a side effect of the task they are actually doing, whereas piggyback takes users' information from a third-party website to gather information.

In his 2013 book, *Crowdsourcing*, Daren C. Brabham puts forth a problem-based typology of crowdsourcing approaches:

- Knowledge Discovery & Management - for information management problems where an organization mobilizes a crowd to find and assemble information. Ideal for creating collective resources.
- Distributed Human Intelligence Tasking - for information management problems where an organization has a set of information in hand and mobilizes a crowd to process or analyze the information. Ideal for processing large data sets that computer cannot easily do.
- Broadcast Search - for ideation problems where an organization mobilizes a crowd to come up with a solution to a problem that has an objective, provable right answer. Ideal for scientific problem solving.
- Peer-Vetted Creative Production - for ideation problems where an organization mobilizes a crowd to come up with a solution to a problem which has an answer that is subjective or dependent on public support. Ideal for design, aesthetic, or policy problems.

Examples

There are some common categories of crowdsourcing that can be used effectively in the commercial world. Some of these web-based crowdsourcing efforts include crowdvoting, crowdfunding, microwork, creative crowdsourcing, Crowdsource Workforce Management and inducement prize contests. Although these may not be an exhaustive list, they cover the current major ways in which people use crowds to perform tasks.

Crowdvoting

Crowdvoting occurs when a website gathers a large group's opinions and judgment on a certain topic. The Iowa Electronic Market is a prediction market that gathers crowds' views on politics and tries to ensure accuracy by having participants pay money to buy and sell contracts based on political outcomes.

Some of the most famous examples have made use of social media channels: Domino's Pizza, Coca Cola, Heineken and Sam Adams have thus crowdsourced a new pizza, bottle design, beer

and song, respectively. Threadless.com selects the T-shirts it sells by having users provide designs and vote on the ones they like, which are then printed and available for purchase.

The California Report Card (CRC), a program jointly launched in January 2014 by the Center for Information Technology Research in the Interest of Society and Lt. Governor Gavin Newsom, is an example of modern-day crowd voting. Participants access the CRC on line and vote on six timely issues. Through principal component analysis, the users are then placed into an online "café" in which they can present their own political opinions and grade the suggestions of other participants. This system aims to effectively involve the greater public in relevant political discussions and highlight the specific topics with which Californians are most concerned.

In 2009, two researchers, founders of Movie Crowd-wisdom Intelligence Strategy, provide the proof-of-concept of crowdvoting's value in the movie industry. Their findings show that the crowd can accurately predict the success or failure of a movie based on its trailer. In 2013, a white paper from Google confirms these results.

Crowdsourcing Creative Work

Creative crowdsourcing spans sourcing creative projects such as graphic design, crowdsourcing architecture, apparel design, movies, writing, illustration, etc.

Crowdsourcing Language-Related Data Collection

Crowdsourcing has also been used for gathering language-related data. For dictionary work, as was mentioned above, over a hundred years ago it was applied by the Oxford English Dictionary editors, using paper and postage. Much later, a call for collecting examples of proverbs on a specific topic (religious pluralism) was printed in a journal. Today, as "crowdsourcing" has the inherent connotation of being Web-based, such language-related data gathering is being conducted on the Web by crowdsourcing in accelerating ways. Currently, there are a number of dictionary compilation projects being conducted on the Web, particularly for languages that are not highly academically documented, such as for the Oromo language. Software programs have been developed for crowdsourced dictionaries, such as WeSay. A slightly different form of crowdsourcing for language data has been the online creation of scientific and mathematical terminology for American Sign Language. Proverb collection is also being done via crowdsourcing on the Web, most innovatively for the Pashto language of Afghanistan and Pakistan. Crowdsourcing has been extensively used to collect high-quality gold standard for creating automatic systems in natural language processing (e.g., named entity recognition, entity linking)

Crowdsearching

Chicago-based startup crowdfynd utilizes a version of crowdsourcing best termed as crowdsearching, which differs from Microwork in that there is no obligated payment for taking part in the search. Their platform, through geographic location anchoring, builds a virtual search party of smartphone and internet users to find a lost item, pet or person, as well as returning a found item, pet or property.

Crowdfunding

Crowdfunding is the process of funding your projects by a multitude of people contributing a small amount in order to attain a certain monetary goal, typically via the Internet. Two basic crowdfunding models exist. The model that has been around the longest is rewards-based crowdfunding. This is where people can pre-purchase products, buy experiences, or simply donate. While this funding may in some cases go towards helping a business, funders are not allowed to invest and become shareholders via rewards-based crowdfunding.

Individuals, businesses, and entrepreneurs can showcase their businesses and projects to the entire world by creating a profile, typically includes a short video, introducing their project, a list of rewards per donation, and illustrations through images. The idea is to create a compelling message that readers will be drawn towards. Funders make monetary contribution for numerous reasons:

1. They connect to the greater purpose of the campaign
2. They connect to a physical aspect of the campaign like rewards
3. They connect to the creative display of the campaign's presentation

The dilemma for equity crowdfunding in the US as of 2012 was how the Securities and Exchange Commission (SEC) is going to regulate the entire process. At the time, rules and regulations were being refined by the SEC, which had until Jan. 1st, 2013 to tweak the fundraising methods. The regulators were overwhelmed trying to regulate Dodd – Frank and all the other rules and regulations involving public companies and the way they trade. Advocates of regulation claimed that crowdfunding would open up the flood gates for fraud, called it the "wild west" of fundraising, and compared it to the 1980s days of penny stock "cold-call cowboys." The process allows for up to 1 million dollars to be raised without a lot of the regulations being involved. Companies under the then-current proposal would have a lot of exemptions available and be able to raise capital from a larger pool of persons, which can include a lot lower thresholds for investor criteria whereas the old rules required that the person be an "accredited" investor. These people are often recruited from social networks, where the funds can be acquired from an equity purchase, loan, donation, or pre-ordering. The amounts collected have become quite high, with requests that are over a million dollars for software like Trampoline Systems, which used it to finance the commercialization of their new software.

Crowdfunding sites

- Kickstarter is a way to fund creative projects. Any creative project is game on this site.
- Indiegogo is open to almost any kind of project (they even crowdfunded a baby),^[69] and the company has a larger international presence than Kickstarter
- Crowdrise is a platform for donating to charitable causes.
- Quirky is a rewards-based crowdfunding platform and online community most often used by product inventors and makers.
- Tilt is a rewards-based crowdfunding platform

- GoFundMe is unique to crowdfunding in that they are not an incentive-based crowdfunding website. The business model is set up to allow for donations to personal causes and life events such as medical bills.

Mobile Crowdsourcing

Mobile crowdsourcing involves crowdsourcing activities that take place on smartphones or mobile platforms, frequently characterized by GPS technology. This allows for real-time data gathering and gives projects greater reach and accessibility. However, mobile crowdsourcing can lead to an urban bias as well as safety and privacy concerns.

Macrowork

Macrowork tasks typically have the following characteristics: they can be done independently; they take a fixed amount of time; and they require special skills. Macrotasks could be part of specialized projects or could be part of a large, visible project where workers pitch in wherever they have the required skills. The key distinguishing factors are that macrowork requires specialized skills and typically takes longer, while microwork requires no specialized skills.

Microwork

Microwork is a crowdsourcing platform where users do small tasks for which computers lack aptitude for low amounts of money. Amazon's popular Mechanical Turk has created many different projects for users to participate in, where each task requires very little time and offers a very small amount in payment.^[6] The Chinese versions of this, commonly called Witkey, are similar and include such sites as Taskcn.com and k68.cn. When choosing tasks, since only certain users "win", users learn to submit later and pick less popular tasks in order to increase the likelihood of getting their work chosen.^[72] An example of a Mechanical Turk project is when users searched satellite images for a boat in order to find lost researcher Jim Gray.

Inducement Prize Contests

Web-based idea competitions or inducement prize contests often consist of generic ideas, cash prizes, and an Internet-based platform to facilitate easy idea generation and discussion. An example of these competitions includes an event like IBM's 2006 "Innovation Jam", attended by over 140,000 international participants and yielding around 46,000 ideas. Another example is the Netflix Prize in 2009. The idea was to ask the crowd to come up with a recommendation algorithm as more accurate than Netflix's own algorithm. It had a grand prize of US\$1,000,000, and it was given to the BellKor's Pragmatic Chaos team which bested Netflix's own algorithm for predicting ratings, by 10.06%.

Another example of competition-based crowdsourcing is the 2009 DARPA balloon experiment, where DARPA placed 10 balloon markers across the United States and challenged teams to compete to be the first to report the location of all the balloons. A collaboration of efforts was required to complete the challenge quickly and in addition to the competitive motivation of the contest as a whole, the winning team (MIT, in less than nine hours) established its own "collaborapetitive" environment to generate participation in their team. A similar challenge was the Tag Challenge, funded by the US State Department, which required locating and photographing individuals in 5 cities in the US and Europe within 12 hours based only on a

single photograph. The winning team managed to locate 3 suspects by mobilizing volunteers world-wide using a similar incentive scheme to the one used in the Balloon Challenge.

Open innovation platforms are a very effective way of crowdsourcing people's thoughts and ideas to do research and development. The company InnoCentive is a crowdsourcing platform for corporate research and development where difficult scientific problems are posted for crowds of solvers to discover the answer and win a cash prize, which can range from \$10,000 to \$100,000 per challenge. InnoCentive, of Waltham, MA and London, England provides access to millions of scientific and technical experts from around the world. The company claims a success rate of 50% in providing successful solutions to previously unsolved scientific and technical problems. IdeaConnection.com challenges people to come up with new inventions and innovations and Ninesigma.com connects clients with experts in various fields. The X PRIZE Foundation creates and runs incentive competitions offering between \$1 million and \$30 million for solving challenges. Local Motors is another example of crowdsourcing. A community of 20,000 automotive engineers, designers and enthusiasts competes to build off-road rally trucks.

Implicit Crowdsourcing

Implicit crowdsourcing is less obvious because users do not necessarily know they are contributing, yet can still be very effective in completing certain tasks. Rather than users actively participating in solving a problem or providing information, implicit crowdsourcing involves users doing another task entirely where a third party gains information for another topic based on the user's actions.

A good example of implicit crowdsourcing is the ESP game, where users guess what images are and then these labels are used to tag Google images. Another popular use of implicit crowdsourcing is through reCAPTCHA, which asks people to solve CAPTCHAs to prove they are human, and then provides CAPTCHAs from old books that cannot be deciphered by computers, to digitize them for the web. Like many tasks solved using the Mechanical Turk, CAPTCHAs are simple for humans but often very difficult for computers.^[46]

Piggyback crowdsourcing can be seen most frequently by websites such as Google that determine a user's search history and websites in order to discover keywords for ads, spelling corrections, and finding synonyms. In this way, users are unintentionally helping to modify existing systems, such as Google's AdWords.

Health Care Crowdsourcing

Research has emerged that outlines the use of Crowdsourcing techniques in the public health domain. The research indicates that collective intelligence outcomes from Crowdsourcing are being generated in three broad categories of public health care; health promotion, health research, and health maintenance.

Crowdsourcing in Agriculture

Crowdsourcing research also reaches to the field of agriculture. This is mainly to give the farmers and experts a kind of help in identification of different types of weeds from the fields and also to give them the best way to remove the weeds from fields.

Limitations and Controversies

There are at least five major topics covering limitations and controversies about crowdsourcing:

1. impact of crowdsourcing on product quality
2. entrepreneurs contribute less capital themselves,
3. increased number of funded ideas,
4. the value and impact of the work received from the crowd, and
5. the ethical implications of low wages paid to crowd workers.

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