

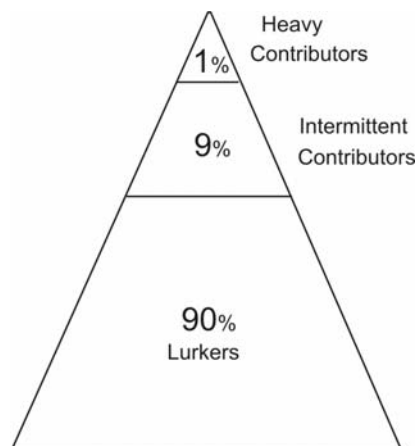
Design that affects digital media based collaboration

Introduction

By focusing on three areas: communication, coordination, and cooperation, I will develop a model to address digital media based collaboration. The objective is to improve collaboration techniques on a web-based digital platform using currently available technologies and integrating collaborative techniques practiced in the teambuilding field and group dynamic studies. I will approach my research from a design perspective, synthesizing current technologies and design practices along with proven team building techniques to create a web site for digital collaboration. I will test my theories using data collected on a web site designed to serve a newly formed organization called the artist consortium. The emphasis of my dissertation is design that affects digital media based collaboration. My final paper will detail design practices, success rates based on user participation, and capturing established objectives accomplished by a collaborative effort.

Collaboration Paradox

Jakob Nielsen describes internet participation in his model labeled the 90-9-1 rule. (1) Whittaker, Terveen, Hill, and Cherny first explored this inequality in their article titled *The Dynamics of Mass Interaction*. In Nielsen's article titled, *Participation Inequality: Encouraging More Users to Contribute*, he describes the internet as a collaborative environment that is roughly controlled by 10% of the users which he labels "heavy contributors" and "intermittent contributors" and the other 90% as "lurkers," who never actively participate in blog postings, social networks, and newsgroup discussions. (1)

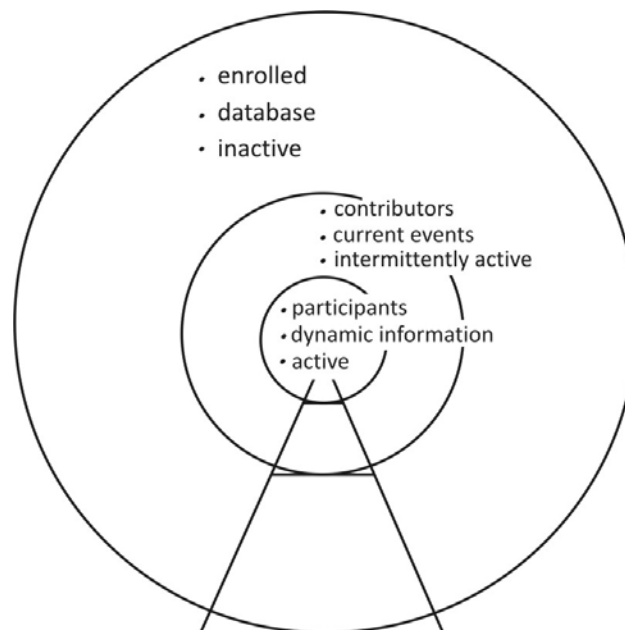


Jakob Nielsen's 90-9-1 rule

The challenge as posed by Nielsen's 90-9-1 rule is encouraging greater participation of the lurkers and better representation of the internet population as a whole. Nielsen states that such an inequality cannot be overcome and at best, lurker's participation might increase a small percentage. (4)

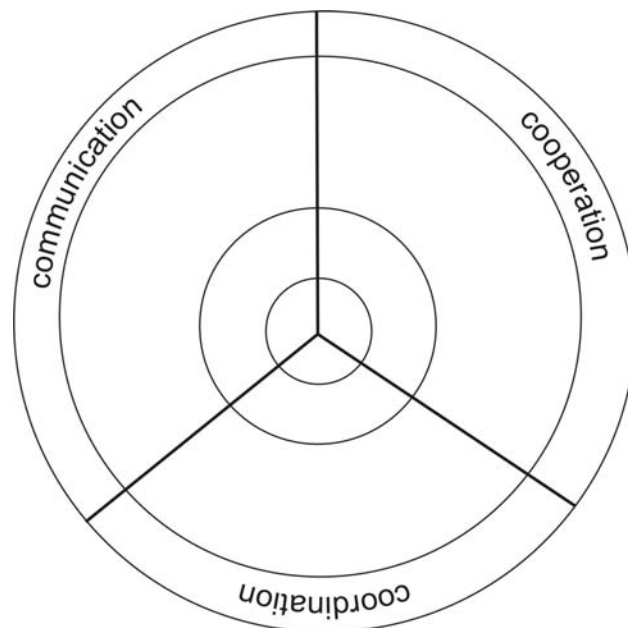
If one equates participation as collaboration and Nielsen's negative forecast of not being able to increase participation on the web accurate, the idea of digital collaboration is weak at best, and practically impossible. This resignation to misrepresentation and catering to a small group seems to influence most web design and not facilitate the greatest level of collaboration.

I would argue that collaboration on the internet, which I will call digital collaboration, is similar to non-digital, person-to-person collaboration that occurs off-line and use similar techniques and considerations involved in group dynamics, experiential learning and team building. Using proven techniques in group effectiveness and team development should transfer to the internet and digital collaboration equally effectively. The key is beginning with a new understanding of what distinguishes effective collaboration and instead of equal participation, the focal point is accomplishing the ultimate objective as a group. Full representation as opposed to equal participation, and a diverse collection of individuals as opposed to homogeneous groups or over-representation from any one sect are distinctions that promote effective collaboration. As illustrated in the model below, I would expand and reframe Nielsen's 90-9-1 formula and use the seemingly inequality of participation as the necessary formula for successful collaboration.



The internet media affords further reach and allows greater numbers of participation, in theory this complements a collaborative model, but in practical terms, the greater the number of participants, the more complicated the collaborative process becomes. Group dynamics and general idiosyncrasies makes full participation and equal representation difficult at best. Similar to a democratic model, for an efficient and effective process, participants must assume roles that promote the process over individual preferences and the equality of participation often comes in a common experience and a shared mission and not equal levels of participation. An effective digital collaborative environment must provide multiple roles, multiple degrees of participation and many levels of success. All formulated around a common theme or goal that motivates organization.

I will emphasize three areas of influence on the collaborative process: communication, coordination, and cooperation. Communication describes the means of conveying and effectively delivering a message. In my work, I will address communication issues by emphasizing the facilitation of information. Coordination considers the ability for participants to effectively interact and work together. Current technologies will provide the solutions to most coordination issues. Cooperation describes participant's state of mind and willingness to engage in the process and interact with other participants. Design of the environment, information and user-centric considerations will enhance the collaborative experience and encourage cooperation.



Why Collaboration

James Surowiecki in his book, *The Wisdom of Crowds*, describes a collective intelligence that outperforms any one expert and wisdom unique to groups (32). One of the benefits of the internet and a digital environment is the ability to reach a greater number of individuals and more diverse representation of people, which is ideal for the group intelligence that Surowiecki describes.

Pierre Levy states in his book *Collective Intelligence*, “Nobody knows everything, and everybody knows something, all knowledge resides in humanity” (13), which aptly explains the dynamics of Surowiecki’s claim. The internet is an ideal environment to mine such a higher intelligence and collective knowledge.

The collaboration paradox is diversity and independence are necessary for collective wisdom as described by Surowiecki; while on the other hand, shared purpose and commonality are vital for effective collaboration. The ideal collaborative environment must consider independent ideas and personalities to mine the full breadth of knowledge while designing a space that facilitates a shared purpose. My proposed digital model will consider the different roles of participants and develop the purpose of these roles for effective collaboration.

Why digital based media

Although such inequity in representation creates a “biased understanding of the community” (Nielsen 2), it can still be an effective model for collaboration. In 2006 Nielsen cited 1.1 billion internet users, with such a large pool of participants; even one percent can provide an accurate representation of the larger population. Even though the lurkers might not actively participate, their contribution is populating the pool of data and collective knowledge.

My work will take into consideration Nielsen’s 90-9-1 rule, but will pull on the work of Levy, Surowiecki, Rheingold, and Tapscott who researched and explored the collective intelligence and wisdom of crowds. I will use these findings to help design an effective collaborative model for digital media.

Research

In an effort to test my collaborative theories I will rely heavily on research from current web sites and data collected in the creation and implementation of a web site that caters to Dallas area artists and art organizations. I will form an organization called the artist consortium and design a web site to support the organization’s mission. The artist consortium mission is to serve artists and the art community and fill the gap between other local art organizations. To accomplish this goal, a digital collaborative environment will be necessary that facilitates a

broad reach, personal touch, comprehensive database and personal connectivity. Similar to other social network sites, success will be gauged by the number of users and degree of participation. From a research perspective, I will be focused on the level of collaboration that is enabled by the web site and feedback from users. Following is a summary of the artist consortium project.

Artists Consortium

The Artist Consortium is a virtual space (web site) designed to connect a community of artists, art enthusiasts, and those who would benefit from a creative touch. The intention is to create a self-populating database similar to the Wikipedia model that connects buyers with sellers, organizations in need with volunteers, and resources to individuals who are working as professional artists.

The unique aspect of the Artists Consortium will be a comprehensive database, populated by the art community it serves and a committee of industry leaders and experts willing to promote local artists and the metroplex art community. The Artists Consortium will rely on a combination of volunteers, paid experts, and charitable contributions by donors interested in supporting the arts. Revenue sources for the Artists Consortium include membership fees and commissions from organized events. The objective is not to compete with local organizations, but to enhance their services, expand their reach, and provide a connection to a more developed, professional art network not easily accessed using a digital based media.

The Artists Consortium mission is to open doors commonly closed to emerging artists and expose metroplex talent to art professionals who commonly overlook smaller markets. The AC is more than a database of talented local artists, but a committee of respected experts and academics who can elevate the relevance and exposure of the consortium by their association and active participation on the web site and in the community.

The Artist Consortium mission is to serve artists who want to sell their work. Services and programs offered by the Artist Consortium consider and cater to the entire art community and connecting people who would benefit from a creative touch. The goal is to include a wide array of art enthusiasts including: artists, collectors, galleries, universities, artist's residencies, non-profit organizations, for-profit businesses, local neighborhoods and municipalities. Although, the idea of a creative membership with a passion for supporting their community will appeal to a large demographic, the services and programs offered by the Artists Consortium will always be designed to serve the serious artists. As a result, the hope is that the community benefits as the artists flourish.

The artist consortium web site will combine features of other social networks and web sites such as the organization and listing of craigslist.org and the collaborative and information collection model of wikipedia.org. Sites such as amazon.com and eharmony.com utilize technology that captures the user's information and links them with products, services and other participants based on personal preferences. Google.com provides a search model that would be necessary for a large database as the artist consortium, while myspace.com, facebook.com and flickr.com provide insight into successful personal web spaces and gallery type displays of work that an artist will want to share. The community connection that will be fundamental in the sites success will be modeled after sites such as meetup.com and linkedin.com. Finally, communication necessary for a collaborative environment will utilize RSS feed technology, blog capabilities and web sites models such as twitter.com to build a strong, connected community.

Conclusion

As Mitchell Kapor, founder of Lotus Development Corporation and the designer of the Lotus 1-2-3 spreadsheet, stated in his 1991 software design manifesto, the reason software was so abysmal was because it wasn't designed, but merely engineered. I will argue that most web sites and social networks are engineered and successful because of content and application and less about user-centric design. I will approach my research and testing of a digital media based collaborative environment from a design perspective utilizing current technology and combining proven formulas to test the concepts of effective group collaboration. I will research and analyze current web sites and social networks and apply my findings to a newly introduced collaborative web site project called artists consortium. The objective of my research will be to benchmark design traits that are predominant on successful social networks and collaborative web sites and test my own digital collaborative model in the artist consortium project. The final paper will state these findings and suggest proven techniques for future collaborative digital media.

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