



A HKU project supported by The Hong Kong Jockey Club

## Web Site Performance of NGOs in Hong Kong

### Introduction

The Internet has become part and parcel of our lives, especially but not limited, to youngsters. To organizations with young people as audience, the internet is a perfect platform for them to convey their messages and even to get acquainted with their target audience.

According to a survey done by the Hong Kong Census and Statistics Department (2013), the people's top two purposes of using Internet services in Hong Kong are information searching and communicating. Again, it has been proven that the Internet is a popular medium for spreading out information and creating interactivity, which NGOs may make good use of. In fact, many NGOs in this day and age have already owned their official Web sites, and some even started using social media tools, all with the same purpose of reaching and interacting with their target audience. Despite the efforts made, it is not as easy as it seems.

NGOs may encounter difficulties in designing a Web site or using other Web tools because of the lack of understanding of the current/upcoming Web technologies and of peoples', usually youngsters', Internet behaviors nowadays. Worse still, the NGOs sometimes may even have no idea whether their Web sites are problematic or not.

There is no single set of formulas that contributes to make a Web site perfect and fit every company/organization. An organization's Web site should be like a person or a brand: the characteristics matter and it takes time to build up reputation. Yet there may be some basic rules that can be followed to safeguard and even add value to one's Web site.

### Background

Apparently, some elements should not be missed to make a Web site sound and effective. Good visual design, thoughtful user interface, adequate navigation, meaningful content, a solid About page, contact information, search function, subscribe function, sitemap, valid XHTML/CSS, cross-browser compatibility, and Web-optimized

*Eleanore Lau prepared this case under the supervision of Dr Michael Chau, Professor Cecilia Cheng, and Professor Paul Yip.*



A HKU project supported by The Hong Kong Jockey Club

images are reckoned as important features (Bowlby, 2008). It is also believed that legal pages, social media buttons, and links are as significant (Duckworth, 2012).

More than that, the idea of sociability and usability (Preece, 2000) was brought up to evaluate Web sites and other Internet activities. Preece believes that with Internet development nowadays, not only usability, which is concerned with how easy it is for people to learn to use and to interact with a product, but also social interaction online—that is, sociability—should be considered. The key components of sociability are the ability to define the community clearly and the policies that support online social interaction. Their success can be measured by the clarity of purpose and access requirements, effective communication, registration policies, and level of governance, trust, and security.

The key components of usability, on the other hand, include the ease of using the technology on the Web and the availability of a communication software. The determinants of success include well-designed navigation, accessibility of information, instructions or technical details of software and registration/log in, ease of communication, ease of searching people and information, readability of instructions, and supports to moderators or other role players.

There is also this Dark Web site Attributes System (DWAS) (Jialun Qin, Yilu Zhou, Edna Reid, Guanpi Lai, and Hsinchun Chen, 2006), a systematic approach proposed to identify and examine attributes that reflect a Web site's level of effectiveness and advancement (originally designed to test the Middle Eastern terrorist/extremist Web sites). The system consists of three major aspects of attributes:

1. Technical sophistication. There are four types of categories that follow this technical aspect. First, basic HTML techniques—that is, the use of lists, tables, frames, and forms—are examined to show how well the Web site's content is organized. The second category, called embedded multimedia, measures the degree of information delivered in varied forms of media by Web sites, including the use of background image and background music, stream audio, or video. Next is the advanced HTML category, in which the use of DHTML or SHTML, predefined script functions, and self-defined script functions are included. It determines how well Web sites implement security and dynamic functionalities. The last category is dynamic Web programming, which measures how well



A HKU project supported by The Hong Kong Jockey Club

attributes—including CGI, PHP, and JSP/ASP—are used to implement dynamic interaction functionalities.

2. Content richness attributes. The amount of information delivered in different formats is measured under content richness attributes. The examined Web elements include hyperlinks, downloadable documents, images, and video or audio files
3. Web interactivity attributes. This aspect of attributes evaluates the level of interactivity between visitors and site owners. There are three types of interactivity. First, one-to-one level includes e-mail feedback, e-mail list feedback form, and guest book. It tells whether basic channels are available for users to use for contacting site owners. Second is the community level, and it contains private messages, online forums, and chat rooms. It shows the extent of many-to-many communication allowed by Web sites. Last is the transaction level, which includes online shop, online payment, and online application form. It indicates visitors' option to shop and pay on the Web sites, and to join the site owner's organizations.

All in all, above are different ideas/ systems raised or designed to determine how well a Web site is doing. Based on all of the mentioned attributes, we reviewed and evaluated the on-site features from 100 Web sites of NGOs that provide youth service in Hong Kong. This case study aimed to describe the analysis results of these NGOs' general online performance and to seek out possible future developments.

## Key Findings

Through observation and content analysis, we have come up with the following key findings:

1. Pictures are not Web optimized

There is no doubt that pictures, those of good quality in particular, draw attention and tell better stories than merely using words. Yet for Web designing, download time should also be put into consideration. It is agreed that images saved at 72 dpi would be Web optimized because 72 dpi would allow a faster download time while it



A HKU project supported by The Hong Kong Jockey Club

retains picture quality without altering the image size appearing on a computer screen.

According to the results, although the average number of images on each Web site reaches 393, some Web sites contain more than a thousand pictures; less than half of them (43%) set their pictures optimized for the Web (72 dpi).

➤ Further illustration

Despite that fact that 72 dpi is believed to be the optimized resolution for the Web and only 43% of the Web sites are up to par, most of the other half are actually in the vicinity of this level and stay at around 96 dpi. Generally, the difference between 72 and 96 dpi is marginal, and in fact, both appear the same on most computer monitors.

Yet when it comes to sites with rich content, that marginal difference may count. Reviewing the Web sites carrying images more than the average number found from our research (which is 393), we noticed that 11 of 20 websites do not follow the optimization standard. Although these Web sites function well and run with an acceptable speed, it appears to take a longer time to have the images loaded. Therefore, it is recommended that when it comes to Web design, not only the resolution but also the site's content amount and download time for readers should be taken into account.

## 2. Navigation above the fold but not in the footer

When we walk into a store, we usually see the best sellers or new arrivals being placed at the entrance or next to the cashier to catch our eyes. Like running a business, keeping the primary features somewhere easy to be spotted is also important for operating a Web site. This gives visitors an idea about what information or functions the Web site contains and how to access them. "Above the fold" is the first visible part to visitors without scrolling and is now generally considered to be the right region to locate site navigation. For site navigation, it can be the logo, main sections of the site, links to subpages, and so forth.

Apart from "above the fold," it is suggested that navigation should be repeated in the footer. It is, again, to help visitors easily find out the content they are looking for.

It is common to see Web sites provide clear navigation. With that being said, while 82% of the NGOs do put their primary navigation above the fold, only 22% of these NGOs repeat the navigation in the footer.



A HKU project supported by The Hong Kong Jockey Club

➤ Further illustration

Among those 22% of NGOs, however, some do not only place a duplicated set of navigation links in the footer, but they also include some extra highlights there. Additional information—such as terms of service, disclaimer, sitemap, or links to other sites—is offered. Sometimes a more detailed version of navigation, with sub-sections, is provided as well.

Apart from navigating, the footer also serves as a host. Scrolling down to the bottom of the page, visitors will see the footer when they finish reading the page. At this stage, the footer gives them an idea what to read next or where the information they are looking for is located. When readers are interested in the page, the footer provides them with an immediate convenience to click for more information. It will then successfully expand one's attention.

In addition, the footer helps convey important message(s) from the site owner. It might serve as a final reminder, reiteration, reintroduction, advertisement, or even a reassurance of the site's credibility and security. Plus with a consistent design with the Web site itself and with its above-the-fold navigation, footer navigation could come in handy and could be a great backup for the main content.

3. Lacking sign-up (20%), valid XHTML/CSS (45%), and online payment option (28%)

There are several elements that may contribute to value a Web site up, yet our subjects are lacking them. These elements include sign-up, valid codes, and online payment.

Sign-up

Many companies or organizations nowadays understand the importance of frequent updates of their information. Staying active helps retain their visitors, so more and more Web sites now contain sign-up functions or allow visitors to follow them. In this way, it helps ensure that their target audience stays tuned.

However, despite the fact that many of the analyzed Web sites put efforts to stay fresh and updated, only 20% of them offer sign-up or subscribe functions. They may hence lose some of their potential audience who do not pay another visit.



A HKU project supported by The Hong Kong Jockey Club

➤ Further illustration

There are different types of “subscription” we observed from our subjects, which includes newsletter/mail-list subscription, membership sign-up, and RSS feed.

Newsletter/mail-list is the most common way of online subscription. Many NGOs ask visitors to leave their e-mail addresses so that whenever the organizations have their latest newsletters published or have other special updates issued, they will reach their subscribers by sending out emails. In that case, the frequency of e-mails sent and the design of the newsletter should be taken care of. The way people hate being bombarded by promotional e-mails is the same with the way they hate being bombarded with newsletter e-mails. NGOs should make sure their messages will not be regarded as spam or will not lead to the cancelation of subscriptions eventually.

Membership sign-up is another way of subscription we found from the Web sites. Visitors are allowed to sign up for online membership and to receive messages from time to time. Sometimes the updates can only be seen after logging in, or they are sent through the e-mail addresses that users provided when signing up.

RSS feed (also known as Really Simple Syndication) provides an option to Web users to keep track of the sites they are interested in. When users have hooked themselves with an RSS feed reader, they can bookmark the Web sites they like and get a heads-up whenever the sites are updated. RSS helps Web users get what they want; on the other hand, it also helps Web sites deliver the latest information to their visitors. Basically, there are two types of feeds: browser subscription feed and on-site subscription feed. For the former, it is up to the Internet browsers whether to provide the RSS subscribe option or not. Readers can only get connected through browsers when they contain the RSS function. The latter, on the other hand, depends on the sites themselves. Many Web sites and blogs nowadays, including some of the sites we observed in this research, have placed an RSS button/widget on their pages. Readers can opt to get updated by simply clicking on that button so that instead of getting e-mails, which can be automatically moved to spam or junk mail box, an on-site news feed will be received.

### Valid XHTML and CSS

XHTML and CSS are common concepts in Web design. The combination of them creates a separation between design and content. Using XHTML and CSS to develop a Web site is important. Yet the accuracy of the used codes is also essential.



A HKU project supported by The Hong Kong Jockey Club

With valid codes, one will get a better look at different Web browsers and get a better result in search engines.

The selected NGOs, nevertheless, are usually not paying attention to it. Less than half of their Web sites (45%) have all/most of their XHTML and CSS codes valid. Some of them have even up to hundreds of invalid codes.

➤ Further illustration

In general, it is not obvious for readers to see the difference between sites with valid codes and those without, unless the sites are viewed under different browsers. Despite that, absolute validity promises better further development of a site. With codes that contain bugs, it is possible that the same presentation will not work again when the site is updated. It also takes time to find out the errors when that dysfunction happens. Therefore, thorough validation of codes prevents the site's breakdown in the future. There may not be any immediate fatal risk, but this precaution is recommended to be taken.

Other than that, there is another fundamental function for code validity. As mentioned above, it helps in search engine optimization (SEO), a process that affects the visibility of a Web site in search results. The search engine systematically reviews a site's content through its codes. In other words, the better the search engine understands and approves, the better a site's ranking in the result. It has been examined and proven to be true that valid XHTML and CSS codes have a role in it. A test done by Shaun Anderson (Anderson, 2007) shows that Google preferred pages with valid codes over those with invalid XHTML and CSS. Under the search engine's automatic recognition, it is generally believed that invalid codes should not be allowed, although the "invalid" Web sites may still look normal to visitors.

### Online Payment Option

In comparison with Web sites functioning as business platforms, NGOs seem to involve less in terms of transactional-level interactivity. By transactional interactivity, it means the existence of an online shop, an online payment option, and an online application form. Applied to our case, online payment option and online application form can be online donation and online application form to be a member/volunteer.

While most of the NGOs do include information on how to donate on their sites, only 27% of them allow online payments.



A HKU project supported by The Hong Kong Jockey Club

➤ Further illustration

Although many of the NGOs that accept donations do not contain online payment services, they provide alternatives and thorough instructions on how to pay offline. Donation forms as well as the methods are clearly stated. Apart from traditional payment methods—such as by cash, credit card, check, and direct transfer—there are other options, such as donation through convenience stores and supermarkets (including 7-Eleven, Circle K, VanGO/China Resources Vanguard supermarket) and by PPS.

Despite the many methods out there, with its gaining popularity, online payment seems to be an unavoidable development. In fact, while e-payment is coming in overwhelmingly, the mobile payment market (in general) is growing rapidly as well on the other hand. It is possible for NGOs to expand their donation methods to online and mobile payments in the future.

4. Almost all Web sites contain a solid About page (95%) and contact information (98%)

The About page is usually the most popular page of a site. It is because people are concerned about the background information—such as what the organization would do or who are working in it. It is also a fast access for visitors to determine whether the site is worth further lingering on. Sometimes this kind of background introduction would even create a sense of connection between the Web site owner (the organization) and the visitors. Therefore, it is crucial for Web sites to contain a sophisticated About page.

Contact information is also necessary. It provides visitors way(s) to enquire, to give feedback, and to simply stay in touch. It also portrays an additional sign of stability because it shows how easy the organization can be reached. Phone number and address can be part of the contact information. With the increasing use of online communication tools among us, other contact methods—including e-mail and feedback forms—are getting common to see (see finding 5).

The importance of these elements is apparently well noted. As a matter of fact, 95% and 98% of the NGOs have inserted a solid background page and contact information into their sites, respectively. And as mentioned above, contact methods are no longer limited to phone numbers and mailing addresses only.

➤ Further illustration

A solid About page and contact information are included in most of the Web sites, but they appear to be in different forms. Take one of the NGOs for example: its





A HKU project supported by The Hong Kong Jockey Club

“About Us” is a very detailed introduction of the organization. It consists of several subpages, including the chairman’s message, executive director’s report, mission, organizational structure, green organization mission, annual report, organization video, awards, job vacancies, and address.

The more in-depth the About page is, the more authentic and trustworthy the site usually looks. And more than the level of credibility, it also tells something of the organization’s personality. For the example mentioned above, it shows that this organization is concerned about environmental protection. It is well established, it has been awarded and recognized, and it appears to be a fun place because of the many different activities shown in videos.

With a clear and appropriate personality under the belt, organizations are able to capture their target audience’s attention and communicate with them better because people are usually prone to connect with other people instead of a mere flat cold screen.

5. One-to-one interactivity is the current mainstream

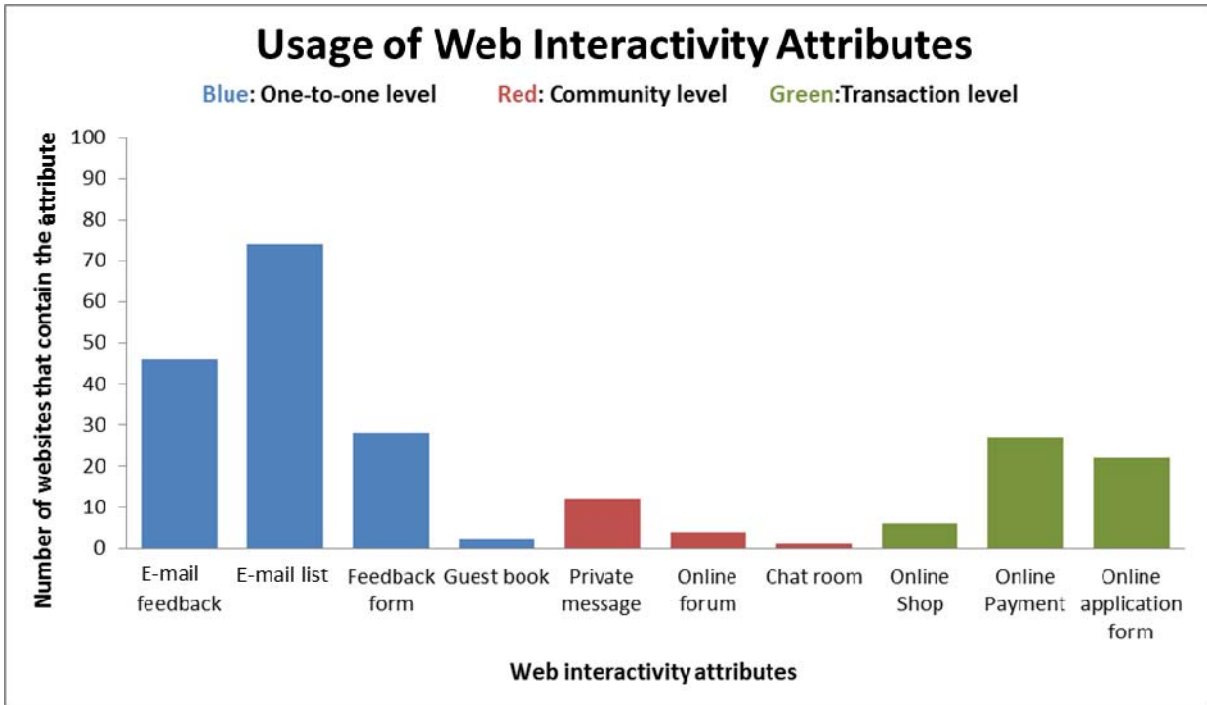


Figure 1: Usage of Web interactivity attributes

From the DWAS, three levels of interactivity have been brought up. Apart from the



A HKU project supported by The Hong Kong Jockey Club

transaction level mentioned previously, we know that there are also one-to-one and community levels. And among all these three levels, one-to-one is the most commonly observed. It involves e-mail feedback (46%), e-mail list (74%), feedback form (28%), and guest book (2%). The usage of other attributes can be found in figure 1.

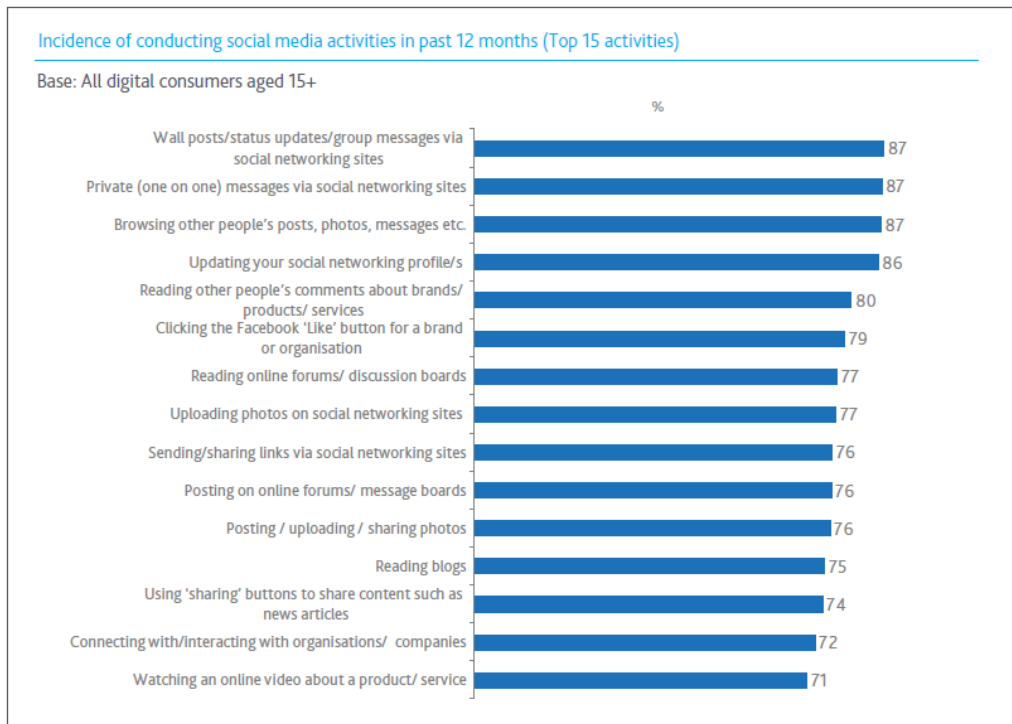


Figure 2: Hong Kong Digital Behavior, November 2011

➤ Further illustration

It is not surprising to see one-to-one interactivity being prevalent among NGOs' Web sites. It enables more customized services and a sense of closeness between subjects and their target audience. At the NGOs' side, on the other hand, it is also easier for them to control the communications and to protect the privacy of their target audience.

Community-level interactivity—which comprises private message, online forum, and chat room—scores the least among the three levels. Yet considering the way social media platforms operate, it is possible that they are gradually replacing Web sites in fulfilling that aspect of interactivity. In fact, a report released by the Nielsen Company (2011) shows that Hong Kong digital users participate actively



A HKU project supported by The Hong Kong Jockey Club

in social media platforms, and most of the popular activities are at the community level (see figure 2).

## 6. Use of social media

As stated above, social media platforms are gaining more and more importance nowadays because it allows people to connect with each other online. Concepts such as viral marketing and word of mouth are spreading because people started tasting the benefits brought forth by the drawn attention and earned credibility.

When an organization has created its own social media account, it is suggested that the Web site should link back to the social media site (and vice versa). Not only will it help reiterate the messages one is trying to deliver, but it also encourages visitors to like/follow/participate in the platform they are more familiar with and interested in. In fact, it is also recommended that social media buttons should be put on the Web site to call for an immediate response, such as “share” and “like”.

In our research, we found that around 40% of the NGOs studied do place social media buttons and links on their Web sites, usually somewhere easy to be seen and/or with the contact information.

### ➤ Further illustration

In those Web sites that provide both social media buttons that link back to the social media sites, there is this one example in which social buttons are placed in every article, video, or photo that is considered to be worth sharing or worth discussing. And the types of buttons on these pages are not limited to Facebook only, but Google+ and e-mail buttons can also be found.

In reviewing the Web sites in our research, as expected Facebook is the most commonly used button/link. And apart from Facebook, Google+, and e-mails, we have also noticed the use of other social media platforms, such as Twitter, YouTube, Weibo, Tumblr, Pinterest, and so forth. For the choice of social media networks, we believe that it should be based on how likely it works for the organization’s specific target audience and how related it is to the service provided.

## 7. Content richness attributes

When it comes to Web design, it is believed that the richer the content, the more that information can be spread and the more that attention can be captured. Therefore, content richness is an important criterion to measure a site’s effectiveness. Having



A HKU project supported by The Hong Kong Jockey Club

more hyperlinks and more downloadable documents boosts content richness because there are also more opportunities for the messages being disseminated. Multimedia documents, including images and video/audio files, are also a great carrier for messages. They seem to be more attractive and tend to leave the audience with a stronger impression.

The research results show that most of the NGOs do put effort on increasing their Web site's content richness. The average number of hyperlinks and downloadable documents contained on these Web sites are 47 and 22, respectively. On the other hand, a considerable amount of multimedia content is also being used, pictures in particular. The average number of images and video/audio files found on the Web sites are 393 and 8, respectively (figure 3).

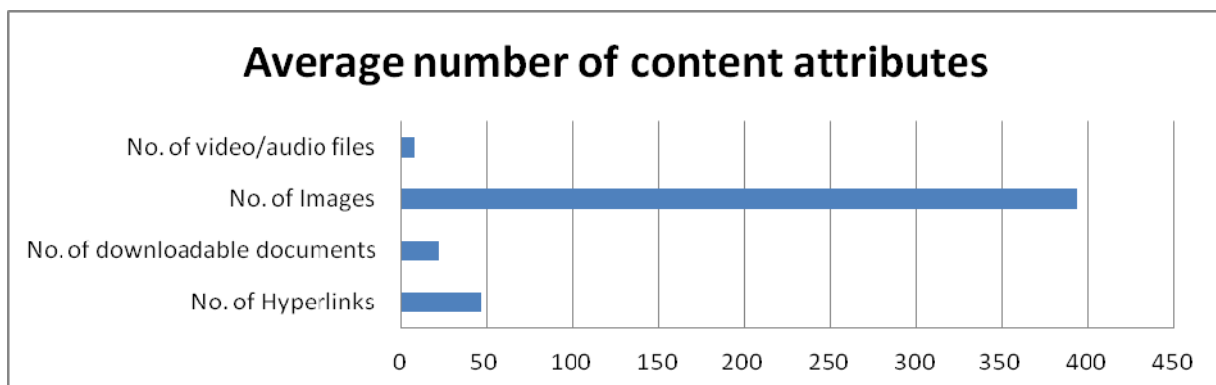


Figure 3: Average number of content attributes

➤ Further illustration

Some of the Web sites, however, contain a very limited amount of content attributes. Also, these Web sites usually have simple designs, with a few basic functions only. Some were even created years ago and have not been updated for long.

These sites' owners, nevertheless, are usually regional NGOs that, instead of having a broad range of target audience, focus on serving youngsters within their own districts. They can be approached more directly with the physical office or center than through a virtual online platform. That may explain the relatively fewer efforts put on these organizations' Web sites.



A HKU project supported by The Hong Kong Jockey Club

## Conclusions and Recommendations

This case study presented seven key findings of NGOs' general online performance in Hong Kong. First, most of the pictures of their sites are not set to the Web-optimized 72 dpi, which is not recommended. Image quality, content amount, and download time for visitors should be all taken into account when it comes to the picture issue. Second, while many sites contain only above-the-fold navigation, it is suggested to also put another set of site navigation, probably with additional information or detailed sections, at their footer.

We have also noticed that not many of our subjects allow “to follow” functions. To do so, NGOs could add in online membership sign-ups and mail-list subscriptions or simply put an RSS follow button, depending on their own situations and resources on hand. Apart from subscription, it is also important for site owners to be aware of their XHTML and CSS codes because absolute validity brings forth better future site development and better results in search engines. Other than that, we also seldom see online payment options, although the NGOs do ask for donations on their sites. With the upcoming e-banking and commerce developments, further payments options online and even on mobile are suggested to be added.

Comparatively, the Web sites are doing well in basic communication. Most of our subjects have prepared a solid and sometimes even in-depth About page as well as contact methods.

One-to-one level of interactivity is usually found on the Web sites, while we believe that the need for community-level interactivity is gradually satisfied by the rise of social media. In fact, not only do we see that 40% of NGOs inserted social media buttons and links into their Web sites, we also see that different types of networks were chosen. And we suggest that other than the most prevalent ones—such as Facebook and YouTube—others can be added based on the organization's characteristics.

Last but not least, knowing that a site's content can be enriched by the number of video/audio files, images, downloadable documents, as well as hyperlinks, we found an average distribution of these attributes among our subjects. Unsurprisingly, the number of images is the largest.



A HKU project supported by The Hong Kong Jockey Club

## References

- Anderson, S. (2007). *Google SEO Test—Google Prefers W3C Valid HTML & CSS?*. Retrieved September 30, 2013, from Hobo Internet Marketing: <http://www.hobo-web.co.uk/official-google-prefers-valid-html-css/>
- Bowlby, S. M. (2008). *15 Key Elements All Top Web Sites Should Have*. Retrieved September 30, 2013, from Freelance Folder: <http://freelancefolder.com/15-top-site-elements/>
- Duckworth, S. (2012). *9 Essential Elements for a Business Website*. Retrieved September 30, 2013, from Digital Internet: [http://digitalinternet.co.uk/essential-elements-business-website/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+DigitalInternet+%28Digital+Internet%29](http://digitalinternet.co.uk/essential-elements-business-website/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+DigitalInternet+%28Digital+Internet%29)
- Hong Kong Census and Statistics Department (2013). *Usage of Personal Computers and Internet Services by HK Residents 2000 to 2012*. (2013). Retrieved from Census and Statistics Department: <http://www.statistics.gov.hk/pub/B71305FA2013XXXXB0100.pdf>
- Nielsen (2011). *Hong Kong Digital Behaviour*. Hong Kong: Nielsen.
- Preece, J. (2000). *Online Communities: Designing Usability, Supporting Sociability*. New York: John Wiley.
- Qin, J., Zhou, Y., Reid, E., Lai, G., and Chen, H. (2006). Analyzing terror campaigns on the internet: Technical sophistication, content richness, and Web interactivity. *International Journal on Human Computer Studies*, 65(1), 71–84.