IDE 611—Assignment 1
Evaluation of a High School Website
October 02, 2015

Site Title: A. Philip Randolph Campus High School

Site URL: http://schools.nyc.gov/SchoolPortals/06/M540/default.htm

Site Contact: not listed

Project Goal: (1) Assess the usability of the website; (2) Develop tactical steps on how the site can be improved in order to get its message across to its audience more effectively.

Overview (description of overall site)

Purpose of Site

The purpose of the website is to inform students and parents of the A. Philip Randolph Campus High School about the school contact details such as phone numbers, key contact departments, map and transportation, and educational support (health services, food services). There is yet another, perhaps more important purposes of the website—to redirect the user to the New York City Department of Education website where certain information is presented.

Target Audiences of Site

The target audience of the website are current students of A. Philip Randolph Campus High School and their parents as well as parents of prospective students of that high school.

Content (general categories) included

The A. Philip Randolph Campus High School website has the following structure:

- About Us
  - Overview
    This page includes only a 70-word quote by A. Philip Randolph about freedom and justice.
  - Photo Album
    This page contains eight images of the school interior and exterior (450px × 338px each) that a user should click to view. No description of images provided.
  - Statistics and Budget
    This page includes a multitude of statistical reports on students’ progress, class sizes, school expenditures, etc.
  - Maps and Directions
    This page embeds a snapshot of a map, information about directions to the school by both public transportation and by car.

- News and Information
  This section is not clickable

- Academics and Activities
  - Athletics and Fitness
    This page lists three sports organizations that perhaps collaborate with this high school.

- Parents
  - Parental Support
This page provides a contact of the parent coordinator as well as an external link that talks about parental support.

- **Students**
  - Student Support
    This page has an external link that is aimed to help student learning.

- **Educational Support**
  - Admissions and Graduation Requirements
    This page has three external links.
  - Food Services
    This page has an external link regarding food services and a link to check one’s eligibility for free meals.
  - Health
    This page provides three external links that talk about health services.
  - Transportation
    This page has two links that provide a schedule for the school bus and a general information about school buses.

- **School Details**
  This narrow section appears on the right side of the main page and has precise information about address, phone numbers, key names that have to do with this high school.

**Techniques employed (e.g. sound, interactivity, animation, color, etc.)**

The website uses a five-color palette: Purple, mustard, gray, blue, and white. Purple is used for coloring blocks and hyperlinks, gray and white are the background colors, dark gray is used for text, blue is used for hyperlinks, and mustard is the text color in purple blocks. There are no interaction tools, animation, or sound systems embedded in the website. There is, however, a search engine tool embedded in the lower left corner of the website as well a language dropdown menu centered on the very top of the website.

**Methods**

**Evaluation Instruments**

There were three tools that I employed to evaluate the A. Philip Randolph Campus High School website:

1. Website Motivational Analysis Checklist (WebMAC) Professional © (v. 2.0)
2. Content Validity Scale ©
3. WAVE Accessibility Evaluation Tool

All three of them allow to holistically evaluate the website regarding content, web-accessibility, graphic components, and usability.

**Description of Instruments Used**

**WebMAC Professional v. 2.0** is an instrument that involves some arithmetic on the part of an evaluator. Designed by Small and Arnone in 1999, this assessment sheet asks 32 questions which basically fall into four categories: How the website is stimulating (S), meaningful (M), organized (O), and user-friendly (E—for “easy-to-use”). For each questions, the evaluator answers with a number: 0 (zero) for strongly disagree, 1—somewhat disagree, 2—somewhat agree, 1—strongly agree. If “not available” variable is applicable to any of the 32 questions, then the evaluator is asked to see to provide
a numeric comment to it: 0—the website would benefit if the element were there, 1—the website does not this this element, 2—the website should better not include that element. These numbers are then displayed are arranged further to get an accumulative results for 4 categories (S, M, O, E) and placed on a graph that shows if the website needs improvement. After some calculations, the numbers for stimulating and meaningful aspects are added to get a Value dimension and the numbers for organized and easy-to-use elements are added to get an Expectation for Success dimension. These numbers are then placed on a graph that demonstrates how the website in question deviates from the ideal website parameters. What is more, WebMAC form asks whether the evaluator would want to return to the website again and whether s/he would recommend the website to a colleague or friend. The form also asks what the evaluator thinks the weaknesses and strengths of the website are.

**Content Validity Scale © (CVS)** is a scale of 10 questions that asks the evaluator to assess the content of the website—its credibility, accuracy, bias, linkage—on the scale of 1 (strongly disagree) through 5 (strongly agree).

**WAVE Accessibility Evaluation Tool** is an online service designed to check whether the website in question meets the standards required for the website to be used by people with disabilities. It can be accessed online (http://wave.webaim.org/) or downloaded as an extension in browsers such as Mozilla Firefox or Google Chrome. This tool gives a visual representation of the issues that a certain website has regarding its usage by people with disabilities. The issues are categorized as errors, alerts, features, structural elements, contrast errors and marked by a certain color on the webpage. If you hover a mouse over the highlighted element, a small screen will appear with explanations as to what problems the website in question has with regard to disability guidelines.

Obviously, the first two evaluation tools reflect each person’s subjective responses. For the purposes of establishing a more objective approach in this paper, three people independently applied WebMAC and CVS for the A. Philip Randolph Campus High School website. I use the average results for both of these tools, rounding numbers (if the result was 3.33, then I use 3 in the final report, if the result was 3.66, then I use 4 in the final report).

**Description of Evaluators**

The three evaluators of the website who used WebMAC and CVS tools are all current graduate students of Syracuse University who plan to graduate in 2016. None of them are professional IT developers or professionals but have pretty good skills using necessary information online; hence, their evaluations were based on the intrinsic understanding of what an appealing and user-friendly website should look like. All reported they tried to be as fair as they could in their evaluations.

**Alex Umstead** (email: aumstead@syr.edu), School of Education, studies Instructional Design. Alex is involved with disabilities programs and studies and plans to work in that sector upon completion of his program.

**Katsiaryna Shmatsina** (email: kshmatstsi@syr.edu), Maxwell School, studies International Relations. Focusing on Western and Eastern European international relations, Katsiaryna worked as a consultant in Belarus where she had to analyze various political reports online and unpack tendencies that happen in International Relations in those regions.

**Yuri Pavlov** (email: ypavlov@syr.edu), School of Education, studies Instructional Design. Previously worked in an internal marketing department at an IT company. He also taught Translation Studies in a Belarusian university.

**Results**

**WebMAC Professional Attribute Scores**

How Stimulating (S) = 2 (needs much improvement range)
How Meaningful (M) = 15 (needs some improvement range)
How Organized (O) = 12 (highly motivating)
How Easy to Use (E) = 10 (needs some improvement range)

Graphical Display of WebMAC Professional © Attribute Scores:

WebMAC Professional Total and V & EX Subscale Scores

Value score (S+M) = 17 (below average range)
Expectancy for Success (O+E) = 22 (around average range)

Graphical Display of WebMAC Professional Total and Value (V) & Expectancy for Success (XS) Subscale Scores:
CVS Scores

<table>
<thead>
<tr>
<th>Statements</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>The source of information for this Web site is credible</td>
<td>4</td>
</tr>
<tr>
<td>There is a way to contact the author of this Web site, if necessary</td>
<td>2</td>
</tr>
<tr>
<td>The factual information or content of the Web site seems accurate</td>
<td>5</td>
</tr>
<tr>
<td>If the Web site presents concepts or principles in its domain (e.g. science, art), they are appropriately presented without confusing or missing information</td>
<td>not applicable</td>
</tr>
<tr>
<td>There are no typographical or spelling errors that could potentially cause the information at this Web site to be misunderstood</td>
<td>5</td>
</tr>
<tr>
<td>The content is appropriate for the intended audience</td>
<td>5</td>
</tr>
<tr>
<td>The links from this site appear to be credible</td>
<td>5</td>
</tr>
<tr>
<td>This Web site appears to be free of bias</td>
<td>5</td>
</tr>
<tr>
<td>The information at this Web site is current enough for the type of information it includes</td>
<td>5</td>
</tr>
<tr>
<td>The links from this Web site appear current and unbiased</td>
<td>5</td>
</tr>
</tbody>
</table>

WAVE Scores [as of 02-Oct-2015]

- 4 Errors
- 57 Alerts
- 0 Features
- 14 Structural Elements
- 0 HTML5 and ARIA
- 31 Contrast Errors

Interpretation of Results

CVS results

CVS survey showed an average result of 4.55 out of 5, which indicates that the content part of the website is accurate, unbiased, with all working links and no typographical or grammatical mistakes. There is, however, a slight doubt in credibility to the source of information, because we as users do not know who the author of the website is and how s/he can be contacted. Another explanation for such high scores may be concise text fragments on each page: There is simply no room for doubting the credibility of descriptive text.

The information displayed on the website seems to be precise and regularly updated; however, not knowing the source of it is the point where skepticism is activated. Most links are credible in the sense that they all lead to the website of New York City Department of Education, with only one link leading to a blog that does not exist. In that sense, I was puzzled as to why the website should exist as such if most of its content is links to another website.

WAVE Accessibility Evaluation results

The major errors that WAVE service identified is the lack of alternative text to images and to links in some places on the website. For example, the image on the main page of the website is clickable, though the only thing it does is that it shows the same picture on a separate page. Such an action seems redundant and also the website provides neither a description for that image, not the purpose of the click. Screen readers will encounter a link or an image but will not be able to effectively communicate where the link leads, what a certain label is for, what the image shows.
Most alerts messages appear next to the text size. Indeed, the text size is extremely small (I would say this is 8px Arial which looks like this: this is 8px in Arial style. It is small for people with good vision, let alone with low vision, and this can be changed very easily. Also, certain links are redundant because they lead to the same page, although the link names are different. This is true for the series of links in the footer of the website. For example, “Privacy policy,” “Equal Opportunity,” and “Disclaimer” links redirect a user to the same page on another website. The question is: Why having three different links and not unite them in one? What is the purpose of those?

Most structural elements problems are about unordered lists or issues with table. The reason it is important is because they help better navigate by those lists and within them. For people with disabilities this is of primary importance.

Finally, all contrast errors are the result of a low level of contrast between the foreground and the background. When the background is grayish and the text is dark gray, not to mention the size of the text, it makes the website less user-friendly for people with low vision or people who have trouble distinguishing between colors. Also, the purple background with yellow text does not provide a good contrast, the text literally drowns in that background.

WebMAC Professional results

The graph indicates that the website is in the average range regarding expectations for success (comprised of website organization and usability) and in the below average range regarding value (comprised of stimulating and motivating factors). In other words, the figures are far from the "awesome website" range and—because it does not give much value to the user—will probably not motivate him or her to return to this website. The graph also shows a vector of improvement, in which to enhance website value aspects should be a priority of the website owner(s). Now I will analyze all the variables used in WebMAC for the website evaluation.

1. How stimulating is the website?

The website is far from stimulating: Out of possible 24 points it got an average of 2. The layout is far from attractive and looks like it was designed in 1995 when websites only started to emerge. Color choices are not pleasing in the sense that they do not always match. Purple and yellow do not look well on this website, the text is small. The name of the website is the name of the high school, which is not bad, but it is not visible that this is the website name. On other pages, fonts are inconsistent. For example, the Overview page has an extended quote which is larger in size than the text elsewhere and the author of the quote is spelled out in a different font. The included images of the high school do not really provide an overview of the high school, they are small and do not have descriptions, not satisfying the curiosity of the user. There is no interactive elements which can maintain user’s attention.

2. How meaningful is the website?

The website is relatively meaningful: It got an average of 15 points out of 24. There is an menu bar on the left that stays with a user on every page that s/he goes. The links are valuable, because they lead to the specific information that is not displayed on the website. The statistics page is the most meaningful part because it has all the information about the high school that may be of interest to parents or students. There are many facts and figures type of documents on that page, which makes the website seem very credible and unbiased. There is no redundant information. There is, however, no room for interaction between the authors and users. One can only use the contact information and call the appropriate contact person listed on the website.

3. How well-organized is the website?

The website is organized in a structured manner: It got an average 12 out 24 on this criterion. Directions on the website are simple, the purpose and target audience is clear and the content is consistent with what students or parents want or should know about the high school. There are no grammatical mistakes. However, the home page button is misleading because it does not lead to the main page of that website but redirects to another website. The visual information is misleading either: The pictures of the school do not seem to be connected to what the website is trying to communicate.
4. How easy-to-use is the website?

The website is not complicated to use: It got an average of 10 out of 24 on the scale. One link is said to be the link to the new version of the website, but it leads to a WordPress blog that contains no information. This is frustrating, especially because it violates the anticipation effect: You promise an important thing, yet you fail to keep up to your promise. The home page link leads to another website. In general, most links lead only to one website, and this websites serves as the contents page for another website. Other hyperlinks work well, all buttons also work well. Graphics is not crisp and a user does not have full control over what s/he wants to see at all times. For example, the Overview page does not provide overview of the website, as one would expect. The whole section is missing—“News and Information” and a user cannot see what is new that s/he should know.

5. What does Value score indicate?

The value score (17 out of 48) indicates that the value is not provided to users in a way that a user should have in order to build trust with them. In other words, users may be disappointed with the website, because the website does not get all the information that the website promises to show. If one wants to know about health services or food services, one should click a link and seek for the information on another website that is generic and does not specifically talk about the health services or food services of this particular high school. Users do not get the stimulus or motivation to use the website in the future.

6. What does Expectation for Success score indicate?

The expectation for success score (22 out of 48) indicates that usability of the website needs to be enhanced. In particular, font size and a general layout. The page looks as though the authors tried to put everything they have to say on one page. They did it successfully, but in order for users to access some content, they have to navigate away from the website. Users do not navigate smoothly on the website, because one major link does not work, the home page link leads to another website, at one point a power point presentation is offered to download—all of this leaves a user confused.

Recommendations

The recommendations for the website logically follow from the interpretation of the results presented in the previous section of the paper. Therefore, in order to improve the website its authors should:

- Simplify the layout of the website by removing the three-column frame, leaving one or maximum two columns (one for the menu and one for the content)
- Create content for the website, otherwise it makes no sense to have a website that only redirects to other places on the web
- Create a page with the personnel of the school, share teacher’s short bios and/or pictures with the working email; this will enliven the website, make it more human-oriented
- Create a page that talks about extracurricular activities that students can attend
- Create a Spanish version of the website; it is highly important in the U.S. overall but more so in New York City, which will allow students and parents who still do not have a good knowledge of English can access the information in their language
- Merge the School Details section with the Overview section, it is not justified to provide it on the main page of the website
- Update the Overview page, make it a real overview; the existing quote conveys little meaning to the user, add more facts and figures about the school (when it was founded, who the alumni are, how many students it has had in the past years, how many students it has currently); it is useful to think of this page as a short resume of the school
- Fix the broken link “Visit our main webpage,” because currently it leads nowhere
- Fix the “Home page” link so that it would lead to the home page of this website and not externally
• Remove the section “News and Information” or fill it with up-to-date content, because currently it is not clickable
• Place the menu bar on top that consists only of the 5 or 6 main sections and fix it there (so that when a user scrolls pages down, the menu bar is always visible), then create drop-down lists for each section of the menu upon hovering a mouse over a section
• Enlarge the font size so that it could be more easy to read it and make the font and font size consistent throughout the whole website
• Change the banner, it does not convey the message that this is the website of a high school
• Choose the name for the website, make it more exciting (rather than “A. Philip Randolph Campus High School” it could be simpler “Randolph High School” in a different font and color)
• Reduce the number of colors used on the website to no more than three and intensify the contrast between foreground and background, which will make the website more accessible by a larger group of people who have low vision
• Update pictures, provide a larger extension to view them, make them exciting and appealing
• Create alternative text to any picture that is provided so that screen readers would be able to read it to the users who use such services
• Categorize content in the statistics page; although this is the most meaningful part of the website, it is complicated for the user to find a necessary report because the existing categories are not categories but merely names of the reports
• Create an F.A.Q. page with the most frequent questions the school has received in the past
• Make the website more interactive; for example, create a quick multiple choice survey that will ask students or parents about what most important for them or create a “thank you” or “like” button at the end of the page which will show how many people found this page useful
• Update the footer, remove repetitive external links, it is useful to think of a footer as a send-off element that has a link to the page of that school in social networks (Twitter, Facebook, LinkedIn, Google+, Pinterest, etc.)
• Add some graphics which will replace words; for example, instead of saying “DOE School Calendar” authors can use a calendar pictogram and a text “Calendar” under it, instead of saying “Map of School Area and Directions” authors can use a globe pictogram or a check-in pictogram and a text “Directions” under it
• Remove the School Search engine in the lower left corner—it is somewhat illogical to use this website to browse for other schools
• Remove the embedded Google Language tool, it looks cheap and it is still not up to par in its translations
• Consider creating a whole new website instead of recreating the current one—there is a need for a new approach rather than minor fixes

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