Online Newspaper Quality Factors:  
The impact of Gender, Age, and Skill Level

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Abstract

There has been a proliferation of online newspapers over recent years. Despite this, or perhaps because of it, 
some quality problems remain. Based on a two-factor model of hygiene and motivator factors, this paper 
examines quality for online newspapers giving attention to differences across gender, age, and computer skill 
level. Hygiene factors are essential requirements whose absence causes dissatisfaction, while motivators are 
desirable elements that add value and increase user satisfaction. This paper presents findings from an 
empirical study of 84 web users. Results show that hygiene factors for our respondents were Timeliness, Content 
Attractiveness, Content Coverage, Usefulness, and Navigation, while motivators were Writing Style, Layout, 
Archives, Services, Interactivity, and use of Multimedia. Four factors were borderline: Journalism Ethics, Ease 
of Use, Front Page & Headlines, and Locating Information. However, the research reveals some differences in 
perception of factors across gender, age, and computer skill levels, and further research is recommended to 
investigate these further.

Keywords

Online newspapers, hygiene and motivator factors, website quality, usability, gender, age, skill level

INTRODUCTION

Online newspapers were considered a revolution in mass media in the 1990’s (Thiel 1998). Their characteristics 
of interactivity, multimedia, and hypertext necessitated a new model of journalism and reading behaviour 
(Massey & Levy 1999). The new model created design challenges, such as: How much should an online 
newspaper resemble the print product? What should the online version provide that the printed version did not? 
How should content be organized in the online environment? What parts of a newspaper’s traditional format 
could be carried over to an online newspaper and what parts must be let go? (McAdams 1995).

Since the mid to late 90’s growth in development and readership has been dramatic with most large and medium 
newspapers now having an online presence. By the year 2000, one in four web users were reading news online 
(Donatello, 2002) with many reading it daily or weekly such that it became their most important news channel 
(Arant & Anderson 2001). Despite the dramatic growth, or perhaps because of it, online newspapers quality 
remains only partially understood.

Quality issues surrounding website design have been extensively studied. Issues addressed include website 
usability and effectiveness (Nielsen n.d. a, 1994), visual and multimedia design (Johnson & Nemetz 1998), 
information or content quality (Smith 1997), website quality dimensions (Huizingh 2000), and website success 
factors (Liu & Arnett 2000). In this research we adopt a holistic or inclusive view of web quality, defining it as 
meeting the needs of (satisfying) users. To achieve this, design must address usability, visual appearance, 
multimedia use, and content quality. The ultimate aim of the site is to attract and retains users (Zhang & Dran, 
2000).

Much of the published research has focused on e-commerce or academic website and the quality factors may not 
be directly applicable to online newspapers. Nevertheless, research frameworks developed may be useful. In 
particular, the two-factor model of Herzberg (1987), as applied to website evaluation by Zhang & Dran (2000) is 
a distinctive theory that identifies two types of quality factors: hygiene and motivators. Hygiene factors are 
essential requirements – their absence causes dissatisfaction. Motivators are desirable elements that add value 
for users – they contribute to satisfaction. The two-factor model provides a practical tool for us to categorize 
quality factors for online newspapers. The research question in this empirical study is:

1. What are the hygiene and motivator factors of online newspapers?
Zhang & Dran’s (2000) study of US college student’s perceptions reported ‘percentage difference’ in responses to each category. Whilst we did not expect to find 100% agreement, we were interested to see if we could explain some of the difference. Consequently, we posed three ancillary questions:

2. Do hygiene and motivator factors differ across gender?
3. Do hygiene and motivator factors differ across age groups?
4. Do hygiene and motivator factors differ across varying levels of computer skills?

The remainder of this report is organized as follows. First we selectively review the literature on website quality and online newspaper design. We then present the research design followed by the results. In the final section, we explore the implications of the research as well as its limitation.

LITERATURE REVIEW

The literature review briefly examines representative articles from major writers in the area of website usability including content and design, e-commerce website quality, and online newspapers. The intent is to extract a set of quality dimensions for the current study.

Website Usability

Website usability consists of two aspects: content and design (Huizingh 2000). Content is the information, features, and services that are offered in the website. Design is the way the content is made available for web visitors and includes both interface and multimedia design. Good scores on design create ease of use for users, a factor found necessary for Online Newspapers (McAdams, 1995). However, some researchers (see, for example, Smith 1997, Fritch & Cromwell 2001) claim that information or content quality should be more highly valued because websites are basically information dissemination tools.

Content

Synthesizing criteria from the literature on website information quality, Smith (1997) develops a tool box for user evaluation of information quality, including:

1. **Accuracy**: Correctness, appropriateness, and freedom from bias.
2. **Authority**: Information should be produced by an expert or reputable organization.
3. **Currency**: Information should be up-to-date.
4. **Uniqueness**: Information not available through other sources is most valuable.
5. **Links to other resources**: Information quality on linked sites should also be high.
6. **Quality writing**: Text should be concise, precise, and interesting.

Among these factors, authority may be influential in user perception of the other factors, because without authority, good information may be disregarded. High standards of journalism ethics may engender perceptions of authority resulting in trust (Fitch & Cromwell, 2001).

Design

Early research into design focused on interface design, most commonly employing heuristic evaluation. Heuristic evaluation uses a small set of evaluators to judge the interface’s compliance with recognized usability principles (the heuristics). Many such lists have been developed, often based on opinion and personal experience rather than research. Usability guru, Jacob Nielsen (n.d. b) identifies ten such principles:

1. **Visibility of system status**: The system should always keep users informed about what is going on, through appropriate feedback within a reasonable time.
2. **Match between system and the real world**: The system should use words, phrases and concepts familiar to users and cause information to appear in a natural and logical order.
3. **User control and freedom**: The system should provide a simple way for users to correct mistakes, that is, to support undo and redo.
4. **Consistency and standards**: The system should not cause users to question whether different words, situations, or actions mean the same thing.
5. **Error prevention**: The system should prevent problems from occurring.
6. **Recognition rather than recall.** The system should provide visible and easily retrievable instructions for the use of the system.

7. **Flexibility and efficiency of use.** The system should cater to experienced and inexperienced users and allow users to tailor frequently used actions.

8. **Aesthetic and minimalist design.** The system should provide content in a pleasing manner and omit irrelevant or rarely needed information.

9. **Help users recognize, diagnose, and recover from errors.** The system should plainly express error messages and precisely indicate solutions.

10. **Help and documentation.** The system should provide help and documentation that are concrete, easy to locate, and focused on the user's task.

**Multimedia**

Hypertext and interactivity are features, which distinguish web media from print media. Good multimedia design can contribute to system quality and information utility (Johnson & Nemetz 1998). Compared to text only, a good multimedia design can increase the clarity of information presented and improve understanding of concepts.

From this review, we see website usability factors clustered around three constructs: information or content quality, interface or ease-of-use (Nielsen, 1994), and multimedia elements including interactivity (Johnson & Nemetz, 1998).

**E-commerce Website Quality**

Online newspapers may be considered a form of e-commerce, hence a brief examination of e-commerce website quality is warranted. E-commerce websites can incorporate a wide range of activities. Successful sites most often include elements of content, commerce, and community (Stair & Reynolds, 2001). Content is the core of an online newspaper with community also a strong element. Successful e-commerce sites not only attract customers but also encourage transactions and return visits. Characteristics such as trustworthiness, dependability, and reliability can help to trigger transactions, while features meeting user needs and generating enjoyment for customers can engender satisfaction, thereby encouraging return visits (Liu & Arnett 2000).

According to Liu & Arnett, the achievement of these goals is based on six critical website factors:

1. **System quality** (e.g., security, privacy, accurate transaction processing, ease of use).
2. **Information quality** (e.g., accurate, complete, up-to-date).
3. **Learning capability** (e.g., interactive dialog capability, search engine).
4. **Well-defined links** (e.g., meaningful titles to links).
5. **Service quality** (e.g., assurance, reliability, empathy, follow-up service).
6. **Playfulness** (e.g., enjoyment, excitement, stickiness).

In the usability literature, system quality generally refers to issues of interface design and ease-of-use (see for example, Nielsen nd a, b). In the e-commerce context, it is extended to include security, privacy, and accuracy of transaction processing. For online newspaper readers, where transactions are not normally required, security may be less an issue than ease-of-use. Privacy could be a concern where personal data are required to register on a site, but not otherwise. Information quality would appear to be a generic requirement of all websites (Smith 1997; Liu & Arnett 2000), and is likely to be particularly important for news disseminating websites. Interactivity is considered by Liu & Arnett (2000) to create learning capability, but it can also help create the important aspect of community, which encourages return visits.

**Online Newspaper Design**

Some researchers argue that online newspapers need to be based on a new paradigm. Under this assumption almost everything has to be recreated from production, consumption and commercialization to language rhythm, and connection with readership (See, for example, Giussani 1997, Huesca & Dervin 1999, Thiel, 1998). Other, more recent, writers claim that online newspapers can adopt the structural mode of printed newspapers based on the fact that news-reading behaviors for both are similar (see, for example Arant & Anderson 2001).
Divergence of views also exists with regard to specific design principles, for example, whether to add information to a node or to split that node into many smaller nodes and consequently to create a deeper hierarchy of nodes (Oostendorp & Nimwegen 1998). However, all agree that navigation quality matters.

Recent research has improved our understanding. For example, some research has shown that online readers tend to look first for headlines, news briefs, and captions when reading the home pages of news sites (Outing 2000). However, Garcia (1997) using eye tracking found that readers stop on the strongest visual element whether that is photograph, graphic, or headline. It has also been shown that online readers prefer more text content than graphics and prefer scrollable pages to hypertext links for locating information (Oostendorp & Nimwegen 1998). So, we might expect that multimedia presentation will rank low for online newspapers.

Research further shows that needs in news service can differ with user characteristics. For example, people with limited online experience tend to be concerned with news value, public service items, and things that are interesting to read, while people with more experience consider design principles such as connection, organization, movement within and among sets of information, and communication among different people (Riley, Keough, Meilich & Pierson 1998). Differences can also occur across genders. For example, compared to men, women are less enthralled with technology (Simon 2001), more trusting of Internet information (Simon 2001), and have a stronger preference for local news (Lewenstein 2000).

Hygiene and Motivator Factors

Our brief review of usability (content and design), e-commerce quality, and online newspapers revealed many quality criteria. Zhang & Dran (2000) suggest that among so many factors, some may be more important than others. In their model, there are two types of factors: hygiene and motivators. They describe these as:

Hygiene factors are those whose presence make a website functional and serviceable, and whose absence causes user dissatisfaction (thus dissatisfiers).

Motivator factors … are those that add value to the website by contributing to user satisfaction (thus satisfiers). (Zhang & Dran 2000, p.1253)

To build a satisfactory website and establish competitive advantage, designers need to first ensure the presence of hygiene factors and continuously identify and add motivator factors. Website hygiene and motivator factors identified by Zhang & Dran are shown in Table 1.

<table>
<thead>
<tr>
<th>Hygiene Factors</th>
<th>Motivator Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Aspects.</td>
<td>Enjoyment.</td>
</tr>
<tr>
<td>Surfing Activity.</td>
<td>Visual Appearance.</td>
</tr>
<tr>
<td>Impartiality.</td>
<td>User Empowerment.</td>
</tr>
<tr>
<td>Information Content.</td>
<td>Organization of Information.</td>
</tr>
</tbody>
</table>

Source: Zhang & Dran (2000)

From our review of website usability, evaluation criteria for e-commerce sites, and online newspaper design, we developed a list of evaluation dimensions for online newspapers (Table 2).

At a glance, it seems that many of the factors for online newspapers are similar to those for e-commerce websites. However, a closer examination reveals differences. First, the emphases are different, for example, balanced, fair and unbiased news is heavily emphasized in journalism ethics, while it does not receive much attention in the e-commerce literature. Indeed an e-commerce marketing site will be deliberately biased. Second, some of the apparently common dimensions have different meanings across the domains. For example, navigation in e-commerce usually refers to searching or moving between pages within the website, while in the information and online newspaper literature it includes both moving both within site and links to external sites. Finally, some factors exist in one but not both environments. For example, playfulness or enjoyment (Liu & Arnett 2000, Zhang & Dran 2000) as a distinct factor is not commonly found in the literature on online newspapers.

While we found differences between online newspapers and e-commerce sites, we found commonality between online and print newspapers. Seemingly common issues and criteria between online and print newspapers...
include: content coverage, writing style, front page & headlines, layout, and journalism ethics. These similarities support the arguments of some scholars that online newspapers can, to an extent, apply traditional standards to online newspapers (see, for example, Arant & Anderson 2001, McAdams 1995)

RESEARCH DESIGN

This research adopted a paper-based survey design. Surveys are an effective strategy for website evaluation (Barnes 2000, Liu & Arnett 2000). They are particularly effective when respondents are experienced web users (Zhang & Dran 2000), and when website interaction is used in the survey process (Barnes 2000).

Table 2: Dimensions for Evaluation of Online Newspaper websites

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Attractiveness</td>
<td>Does the selection of content stimulate the interest of readers and have an appropriate classification of contents and features? (Lewenstein 2000, McAdams 1995, Zhang &amp; Dran 2000)</td>
</tr>
<tr>
<td>Content Coverage</td>
<td>Does the website cover appropriate information and features? (Smith 1997, Zhang &amp; Dran 2000)</td>
</tr>
<tr>
<td>Journalism Ethics</td>
<td>Is the content balanced, fair, and unbiased? (Byrd, 1997, Zhang &amp; Dran)</td>
</tr>
<tr>
<td>Ease of Use</td>
<td>Does the site have a use-friendly interface? (McAdams 1995, Nielsen n.d. b)</td>
</tr>
<tr>
<td>Writing Style</td>
<td>Is the writing short, snappy, and conversational so that it is comfortable for readers to follow. (McAdams 1995, Giussoni 1997, Zhang &amp; Dran 2000)</td>
</tr>
<tr>
<td>Interactivity</td>
<td>Does the website provide an effective channel for reader-journalist communication, such as email, bulletin boards, and real time chat rooms? Is it easy for the reader to add and send information to the website? (Deuze 1998, Massey &amp; Levy 1999, Liu &amp; Arnett 2000, Zhang and Dran 2000).</td>
</tr>
<tr>
<td>Locating Information</td>
<td>Is the length of a single web page (a node) appropriate? Is an appropriate distribution made between hypertext pages and scrolling pages? (Oostendorp &amp; Nimwegen 1998)</td>
</tr>
<tr>
<td>Usefulness</td>
<td>Is the information appropriate to the user’s task (Zhang &amp; Dran 2000)</td>
</tr>
<tr>
<td>Multimedia Presentation</td>
<td>Does the online newspaper have good integration and organization of text, audio and video content? (Cuenca 1998, Deuze 2001, Johnson &amp; Nemetz, 1998)</td>
</tr>
<tr>
<td>Archives</td>
<td>Are links to older articles and older newspapers effectively provided? (McAdams 1995).</td>
</tr>
<tr>
<td>Services (other than news)</td>
<td>Are services such as restaurant reviews, airline reservations, and entertainment provided? (Liu &amp; Arnett 2000, McAdams 1995, Massey &amp; Levy 1999)</td>
</tr>
<tr>
<td>Front Page &amp; Headlines</td>
<td>Does the newspaper have an attractive front page and headlines? (Garcia 1997, McAdams 1995)</td>
</tr>
</tbody>
</table>

Sampling

The research used a convenience sample of university personnel: students, academics, general staff, and visitors. About half were students in a foundation information systems class, approached to participate during a class lecture. Students in this class typically have varied levels of computer skills and Internet experience both at the commencement and conclusion of the course. All participation was voluntary and we provided chocolate bars and chances of winning movie tickets as incentives for participation.
**Survey Instrument**

The survey consisted of five parts, requiring 10-15 minutes to complete (Survey available on request).

In **part one**, half the respondents were directed to read the news website of British Broadcasting Corporation (BBC: www.bbc.co.uk) and the other half Voice of America (VOA: www.voa.gov) and to answer a few simple questions about the content. In **part two**, respondents were asked to rate the designated online newspapers on each of the 15 quality dimensions, using a 7-point Likert Scale anchored by polar adjective pairs of poor (1) and very good (7). Two websites were chosen to reduce any site effects on classification of factors. Parts one and two were designed to ensure respondents had recent experience with online newspapers when formulating responses to other parts. Data from parts one and two were not analyzed.

In **part three**, respondents were asked to rate each of the 15 quality dimensions in terms of their importance to the respondent’s satisfaction. The 7-point Likert Scale was anchored by polar adjective pairs of Not Important (1) to Very Important (7). The rating data were designed to provide a cross check on results obtained in the classification task of part four. In **part four** respondents were asked to classify each quality dimension into one of two categories: hygiene factor and motivator factor.

**Part five** collected respondent information for the purpose of classifying responses. Questions were asked about language, gender, computer skills, online newspaper experience and age.

Prior to the survey, the instrument was pilot tested by six postgraduate students and a university professor. Pilot respondents were asked to complete the questionnaire and to comment on the layout, clarity of instructions, questions, and the comprehensiveness of the dimension list. Respondents of the pilot group were not included in the sample for analysis. Following recommendations of the pilot respondents, we modified some wording and added two factors into the instrument: Archives and Services.

**Survey Procedure**

Data were first collected from volunteers in the information systems class. At the beginning of a large group lecture, we made a brief presentation to students outlining the purpose of the study and inviting participation. We also distributed a short ‘invitation to participate’ to each student. Data collection for this group began in a university computer lab immediately following the scheduled end of the class. On completion, students were given a chocolate bar and a movie competition entry form. Further participants were targeted around campus to provide some diversity in the sample with respect to computer skills, gender, and age, and to increase the sample size. These participants took the survey away and collected a chocolate bar and movie competition form when they returned the survey to a central location within the school.

**Data Analysis**

Data were analyzed to obtain descriptive statistics (number, percentage, mean, standard deviation and ranking) appropriate to the research questions. At the time of submission, inferential statistics had not been computed.

To measure the factor importance from Part 3, we used the average score on the 7-point Likert Scale. To determine if an item was a hygiene or motivator factor we used the percentage difference, which was the procedure used by Zhang and Dran (2000). To calculate the percentage difference, we subtract the percentage of people who identify the factor as a Motivator factor from the percentage of people who identify it as a Hygiene factor. So positive values represent hygiene factors and negative values represent motivators, with the percentage value indicating the strength in terms of relative proportion of respondents choosing the dominant direction.

**FINDINGS**

In this section, we first report the respondent characteristics, and then summarize the data for factor classification overall and by gender, age, and computer skill groups.

**Respondent Characteristics**

Most respondents were at least occasional readers of online newspapers, with 36% reading online newspapers quite often or frequently, and 45% occasionally or sometimes.

Of the 84 respondents 43 were men and 41 women. The median age was approximately 22 years with 19 respondents (23%) older than 25 years. Just over half (51%) reported their computer skills as skilled or highly skilled, 39% reported satisfactory skills, and only 10% considered their skills to be ‘somewhat weak’. There...
appeared to be no difference in composition of the male and female groups with respect to age or reported level of computer skills. Respondent characteristics are summarized in Table 3.

Table 3: Respondent Characteristics

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>Age</th>
<th>Self-Reported Computer Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20 or less</td>
<td>21-25</td>
</tr>
<tr>
<td>Male</td>
<td>43</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Category Total</td>
<td>33</td>
<td>32</td>
<td>19</td>
</tr>
<tr>
<td>TOTAL</td>
<td>84</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Table 4: Hygiene and Motivator Factors of Online Newspapers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hygiene</strong></td>
<td><strong>Borderline</strong></td>
<td><strong>Motivator</strong></td>
<td></td>
</tr>
<tr>
<td>Timelessness</td>
<td>Content</td>
<td>Attractiveness</td>
<td>Content</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------</td>
<td>-----------------</td>
<td>---------</td>
</tr>
<tr>
<td>All sample</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Percentage difference</td>
<td>35.71</td>
<td>30.12</td>
<td>27.71</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All sample</td>
<td>H/M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Percentage difference</td>
<td>30.23</td>
<td>11.63</td>
<td>34.88</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Skilled</td>
<td>H/M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Percentage difference</td>
<td>44.19</td>
<td>33.33</td>
<td>42.86</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>H/M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Percentage difference</td>
<td>26.83</td>
<td>26.83</td>
<td>12.20</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aged 20 or less</td>
<td>H/M</td>
<td>H</td>
<td>B</td>
</tr>
<tr>
<td>Aged 21-25</td>
<td>H/M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Percentage difference</td>
<td>25.00</td>
<td>48.39</td>
<td>31.25</td>
</tr>
<tr>
<td>Aged 26 or older</td>
<td>H/M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Percentage difference</td>
<td>60.00</td>
<td>40.00</td>
<td>20.00</td>
</tr>
</tbody>
</table>
Hygiene and Motivator Factors

As described earlier, to determine whether an item is a hygiene or motivator factor, we subtracted the percentage of respondents who identified the factor as motivator from the percentage who identified it as hygiene. Consequently, positive values represent hygiene factors, negative values represent motivators, and the absolute value represents the strength of the dominant direction. We classified a factor as hygiene or motivator only if there was at least a 10% difference in ratings. To obtain a 10% difference, at least 55% must choose the dominant direction (hygiene or motivator). Factors with less than 10% difference were considered borderline. Table 4 shows the results for hygiene and motivator factors. Shaded boxes represent motivators.

Four factors showed low percentage differences, and must be considered borderline factors overall - neither distinctively hygiene nor motivator factors. We later found these factors were classified differently across gender, age, and skill groups. They were: Journalism Ethics (7.14%), Ease of Use (2.38%), Front Page & Headlines (2.38%), and Locating Information (2.38%). A rating difference of 2.38% in a sample of 84 indicates a rating ratio of 43:41 in the dominant direction (in this case hygiene:motivator).

Importance ratings

The survey included importance ratings as a check on the reliability of the classification task. To be reliable, we would expect motivators to be rated lower in importance than hygiene factors. The importance ratings along with the classifications are shown in Table 5. From this table we see, that the lowest five factors are all motivators with the three weakest factors (Multimedia Presentation, Services, and Interactivity) also rating lowest. We also observe that the strongest hygiene factor, Timeliness, received the highest importance rating. This provides some evidence for the reliability of the classification task. However, two factors stand out as anomalies: Ease of Use and Locating Information. Ease of Use ranks second in importance and Locating Information fourth, yet both received differing classification by our respondents and were considered borderline. The reason for the anomaly may be the differential ratings across gender, age, and computer skills. Ease of Use differed in classification across computer skill levels where it was a strong hygiene factor for less skilled users and a motivator for skilled users. It also varied with age, being a hygiene factor for older respondents (>26 years) and a motivator by younger respondents (<20 years). Locating Information varied most markedly with age, being a hygiene factor for younger respondents (<20 years) and a motivator for our mid-age range (21-25 years). It also varied somewhat with skill levels. Despite the two outliers, we feel confident in saying, in general, importance ratings support or are consistent with hygiene and motivator classifications.

Table 5: Importance Ratings Compared to Hygiene/Motivator Classification

<table>
<thead>
<tr>
<th>Factors</th>
<th>Average Rating (sd.)</th>
<th>Classification (Percentage Difference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Timeliness</td>
<td>6.11 (1.16)</td>
<td>Hygiene (35.71%)</td>
</tr>
<tr>
<td>2. Ease of Use</td>
<td>5.96 (1.16)</td>
<td>Borderline (2.38%)</td>
</tr>
<tr>
<td>3. Content Coverage</td>
<td>5.84 (1.02)</td>
<td>Hygiene (27.71%)</td>
</tr>
<tr>
<td>4. Locating Information</td>
<td>5.80 (1.19)</td>
<td>Borderline (2.38%)</td>
</tr>
<tr>
<td>5. Content Attractiveness</td>
<td>5.65 (1.22)</td>
<td>Hygiene (30.12%)</td>
</tr>
<tr>
<td>6. Usefulness</td>
<td>5.54 (1.02)</td>
<td>Hygiene (19.05%)</td>
</tr>
<tr>
<td>7. Navigation Quality</td>
<td>5.53 (1.15)</td>
<td>Hygiene (11.90%)</td>
</tr>
<tr>
<td>8. Journalism Ethics</td>
<td>5.45 (1.11)</td>
<td>Borderline (7.14%)</td>
</tr>
<tr>
<td>9. Writing Style</td>
<td>5.33 (1.04)</td>
<td>Motivator (-11.90%)</td>
</tr>
<tr>
<td>10. Front Page &amp; Headlines</td>
<td>5.28 (1.57)</td>
<td>Borderline (2.38%)</td>
</tr>
<tr>
<td>11. Archives</td>
<td>5.17 (1.33)</td>
<td>Motivator (-27.71%)</td>
</tr>
<tr>
<td>12. Layout</td>
<td>4.99 (1.25)</td>
<td>Motivator (-14.29%)</td>
</tr>
<tr>
<td>13. Services</td>
<td>4.66 (1.34)</td>
<td>Motivator (-38.10%)</td>
</tr>
<tr>
<td>14. Interactivity</td>
<td>4.64 (1.48)</td>
<td>Motivator (-44.58%)</td>
</tr>
<tr>
<td>15. Multimedia Presentation</td>
<td>4.23 (1.46)</td>
<td>Motivator (-47.62%)</td>
</tr>
</tbody>
</table>
Gender Differences in Perception of Quality Factors

The hygiene and motivator factors of men compared to women are shown in the second major row of Table 4.

Thirteen of the fifteen factors were classified the same by men and women but two differed. Writing Style was a motivator for men and a borderline hygiene factor for women. Conversely, Front Page & Headlines was classified as hygiene by men and was a borderline motivator for women.

Among the factors classified the same by men and women, some differed markedly in strength. Two hygiene factors differed markedly: Content Coverage (more important to men), and Content Attractiveness (markedly more important to women). Similarly, four of the motivators differed markedly in strength: Writing Style, Archives, and Security (more important to women) and Layout (more important to men).

Taken as a whole, the results show some differences in perception of factors across gender.

Skill-based Differences in Perception of Quality Factors

Respondents were grouped for analysis into two skill categories: less skilled and well skilled. Less skilled combines those with self-reported satisfactory and weak skills, while well skilled combines the skilled and highly skilled groups. Their classifications are shown in the second major row of Table 4.

The most notable difference in ranking across the computer-skills groups is Ease of Use, being a hygiene factor for the less skilled (21.95%) and a motivator for the skilled (-16.28%). This finding is not surprising; we would be surprised to find Ease of Use more important to skilled users. Also showing classification differences across skill groups were Journalism Ethics, Front Page & Headlines, and Locating Information all of which were classified hygienic factors by skilled users and motivators by the less skilled. The different rankings by skill level contributed to four factors being borderline for the sample as a whole.

In addition to classification differences, some factors showed marked differences in relative strengths. Timeliness and Content Coverage were both more consistently rated hygiene factors by skilled users. Similarly, Archives, Interactivity, and Multimedia Presentation were more consistently rated motivators by skilled users.

These results provide some evidence that level of computer skills can contribute to perceptions of essential (hygiene) and motivational website characteristics.

Age-related Differences in Perception of Quality Factors

For analysis, ages were clustered into three groups: 20-or-less, 21-25, and 26-or-older. The hygiene and motivators factors by age groups are shown in the third major row in Table 4.

Ten of the 15 factors were classified the same across all age groups. These included the four strongest hygiene factors and the four weakest motivators. Five factors differed. Navigation stands out as being a motivator for older respondents and a hygiene factor for those aged 25 or less. Similarly, Layout shows a marked difference being a motivator (-60.00%) for older respondents compared to a borderline hygiene factor for those aged 21-25 years (6.25%).

In addition to classification differences, some factors revealed marked differences in strength or consistency of ratings. These include more consistent ratings by the 26 and older group for Timeliness (60.00%), Layout, Archives, and Interactivity (all -60.00%) and Multimedia Presentation (-80.00%). With the exception of Interactivity, these were much more consistent ratings than were received by the other age groups.

Consideration of the differences in classifications across age groups suggests to us that age may be an important differentiator in essential (hygiene) factors for websites. This holds even in this sample with relatively homogenous ages and education levels. We might expect differences in a broader sample to be even more marked.

SUMMARY AND CONCLUSIONS

Respondents in this research reported five hygiene factors (Timeliness, Content Attractiveness, Content Coverage, Usefulness, and Navigation) and six motivators (Writing Style, Layout, Archives, Services, Interactivity, and Multimedia Presentation). However, the findings suggest that relative importance of factors is not uniform but differs across gender, age, and skill level groups.

Using a criterion of greater than 33%, we find that men strongly value Content Coverage, while women strongly value Content Attractiveness and Timeliness. Using a similar criterion (-33%) we found men have limited need for Archives, Services, Interactivity, and Multimedia Presentation, while women rate lowly only Interactivity and Multimedia Presentation.
Considering age, we find many seemingly random differences. Only five factors showed consistent directional patterns in classifications with Ease of Use, Writing Style, and Services all becoming more fundamental with increasing age, and Front Page & Headlines and Archives becoming less so. Again, using a criterion of greater than 33%, we find that young people (20-or-less) strongly value Timeliness, those aged 21-25 value Content Attractiveness, and those 26-or-older value both Timeliness and Content Attractiveness.

Level of computer skills also impacted factor classification. Those less skilled had no factors reaching the 33% threshold, while the skilled users valued Timeliness and Content Attractiveness.

Our analysis shows that despite some similarities, gender, age, and level of computer skills appeared to influence the classification and strength of online newspaper quality factors in this study.

CONCLUSION

This research explores potential hygiene and motivator factors for online newspapers. However, future research will be needed to validate and extend the findings. Extension is possible in at least three ways: sample composition, factor decomposition, and contextual factors.

The sample in this study was confined to a small sample (84 respondents), biased toward university students. These may not be considered representative of all online readers, though respondents reported varying skill levels and varying frequencies in online news reading. Further studies could be directed toward larger and less biased samples and may examine other demographic characteristics such as cultural differences.

Future studies might also decompose factors to provide finer granularity. In this study, factors were broadly defined, but finer granularity might be provided by research or by using component questions from other studies. This granularity may help to explicate reasons for some of the differences within groups of users.

Future studies might also consider contextual factors such as purpose for reading online newspapers as opposed to print newspapers. We might, for example, hypothesise that factors would differ for those with easy access to print media compared to those without, such as, foreign students or newly arrived immigrants wanting news from ‘home’.

Finally, additional research is required to show whether the factors that determine customer satisfaction also influence the choice of particular news websites.

Online newspapers are an important source of news for many people. The issue of relative importance to users of factors in system design, information, and multimedia presentation is an important topic. This study provided some insights into hygiene and motivators for online newspapers and the direction in which they differ across gender, age, and skill levels.

REFERENCES


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