REDESIGNING A RADIO STATION WEBSITE THROUGH A MULTI-METHOD EXPERIMENT

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ABSTRACT

Radio station websites in collaboration with social media platforms such as Facebook, Twitter and Instagram are able to enhance the listening experience, as well as the interactivity of radio stations. However, only a few studies have investigated the audience preferences in terms of three components, namely content, structure and layout and appearance when constructing a radio station website. Using different methods such as eye-tracking, qualitative methods and quantitative methods during a two-phased experiment, allowed for a comprehensive understanding of consumers' preferred content, structure and layout and appearance of a radio station website to be obtained. Researchers could benefit from using a multi-method experiment as the results indicated how different methods allowed for a greater understanding of consumers' preferences. Different methods indicated that consumers' preferences according to their perceptions (online questionnaire) and their eye movement (eye-tracking) differ (compared to the attention paid to advertisements).

INTRODUCTION

New media technologies have altered radio in South Africa by transforming the processes of newsgathering and audience-interaction, as radio stations can now be accessed through multiple platforms such as websites and social media platforms (Chiumbu and Ligaga, 2013). Changing mediaand online environments necessitated radio as a marketing communication channel to reinvent itself in order to enhance the listening experience and level of listener-engagement by means of being more interactive. Essentially a radio station's primary purpose is to provide quality programming (Atkinson, 2003). However, through adding a visual component to the audio, the listening experience and relationship-building efforts can be enhanced as this allows for increased listener interaction and participation (Bentley and Barnes, 2015; Berry, 2013; Chiumbu et al., 2013). Additionally, radio station websites serve as promotional tools not only for media organisations in terms of self-promotion (Bentley, 2010), but also for existing "airtime" clients to reach their consumers more effectively. It is, however, important that radio stations gain insight into who their online users are and why these users visit their websites. It is also essential that radio stations establish which web features these listeners use, what content they prefer on the website and how it should be presented to them. In 2002 Potter recognised a clear mismatch between radio stations' website offerings and the expectations of the listening public – an incongruence which can harm a radio station's relationship with its audience.

Nielsen (2012) states that "if a website is difficult to use, people leave. If the homepage fails to clearly state what a company offers and what users can do on the site, people leave. If users get lost on a website, they leave. If a website's information is hard to read or doesn't answer users' key questions, they leave". Therefore, it is essential that a company's website meets the expectations of the targeted audience to ensure the continued and satisfactory use of the website. Djamasbi (2014) concluded his study on eye-tracking and website experience stating that designing for positive web experiences is no longer an option but a requirement if an organisation wants to remain competitive in today's business environment. This implies that consumer satisfaction can be enhanced and return visits to the website can be encouraged by means of truthfully identifying consumers' preferred content, design principles and features (Lee and Kim, 2002; Yang, Ahmed, Ghingold, Boon, Mei and Hwa, 2003). Scholarly research, published within the last decade, focusing on the preferred content that a website should contain, along with the design of a radio station website, is limited. Therefore, the aim of this study is to determine the content, structure and layout and appearance of a radio station website, by making use of a multi-methods experiment.

The remainder of this paper will be organised as follows: First, a brief overview of literature on consumers' preferred radio website content and the design of radio websites will be provided and the methods employed by previous researchers, as well as the outcomes and limitations will be discussed. Thereafter the multi-methods experiment process followed in this study will be described. The rationale and procedures of each method will be discussed, along with the enhanced understanding offered by the experiment. Finally, the key insights, value and benefits will be summarised.

BACKGROUND

The four Cs of web-design – content, community, communication and commerce – is essential for increasing webpage-stickiness (Chaffey and Smith, 2012; Cant and Van Heerden, 2013). User-friendly websites should provide the right information along with the adequate level of detail in an accessible manner so that the audience can access the information they are looking for with ease (Cant et al., 2013). Despite the vast amount of available media, radio audiences have been identified as some of the most content-driven (Bennett, 2001; Eastman and Ferguson, 1997), purposeful and goal-oriented (Krieger, 2001; Napoli, 2002) consumers of electronic media. It is therefore important for radio station websites to provide users with relevant and valuable content. Through a combination of an online survey and content analysis on radio station websites, Edison Media and Arbitron Research (2000) identified the following fifteen features that users of radio station websites preferred to see: the ability to listen to the radio station, online live-streaming, programme information and broadcasting schedules, information on DJ's, information about recently played songs, the opportunity to complete polls/surveys about the music played, concert information, competitions, information on places to visit or events in the local community, weather information, interaction with the station, updates on live appearances by the station, printable coupons from advertisers, and appropriate links to order station merchandise. Not only do consumers view information (content) and interaction (community and communication) as essential factors on a radio website, these factors also determine their motivation to pay a return visit to the site (Edison and Arbitron, 2000; King, 1998; Kraut, Patterson, Lundmark, Kiesler, Mukhopadhyay and Scherlis 1997; Murphy, 1998). Websites should therefore provide updated, relevant and useful content (Cant et al., 2013, Thomases, 2000; Perez, 2000; Gapper, 1998) to their consumers in an attempt to encourage repeat visits or increase website stickiness (Cant et al., 2013). According to Huang and Benyoucef (2013) there are several characteristics to a user-centred designed website: participation from users, conversation among users, community, recognisable participants and good system quality. Based on previous research it is evident that only three of the four Cs - content, community and communication – apply in the case of a radio station, considering that the fourth C namely commerce, is irrelevant.

The three components a website comprises of is the website content, website structure and layout and website appearance (Cant *et al.*, 2013). Not only is it imperative that a website provides the information required and expected by its users in order to ensure its usefulness, but also to guarantee the continued

use thereof. In a survey of 365 radio station websites it was found that the content on the radio station websites did not reflect that which users indicated would interested them (Potter, 2002). It is therefore important to determine the needs and expectations of the users in order to incorporate those desirable features into a structure and layout that appeals to the audience, on a website with a certain 'look and feel' (appearance).

METHODOLOGY

OFM is a radio station based in Bloemfontein, South Africa, whose broadcast area includes Bloemfontein and the greater surrounding area. The radio station's content, structure and layout and appearance have changed over the years, based on management's perspective on what the consumer prefers. The aim of this study is to determine listeners' preferences in terms of the content, structure and layout and appearance of a radio station website, through a multi-methods experiment. By employing multi-methods throughout the experiment, the disadvantages of one method can possibly be negated by the advantages of another. A clearer and more understandable motivation for the preferred components of the radio station website can thus be provided – ultimately resulting in a more usable website.

Based on Elling's (2012) five dimensions of website evaluations the user method (1), as opposed to the expert method was employed, thus real, current users participated in the experiment. The in-use method (2), which meant the participants – guided by certain tasks – had to use the website as it had been intended, was preferred over the non-use method. Moreover, the evaluations took place in a laboratory setting as opposed to a real-life setting, as it would have been difficult to control real life settings, even on a local level (4). Lastly, the study was conducted in a closed setting (5), rather than an open setting, in an attempt to understand the participants' thoughts and perspectives on the three components of a website (content, structure and layout and appearance).

Google analytics were used in order to obtain an objective view of the extent to which the website was used at the time. Thereafter, a content analysis of existing radio station sites was conducted to determine the content of similar websites. Considering that content analysis does not allow insight into the behaviour of users (Atkinson, 2003; Pitts and Harms, 2003; Potter, 2002) and users have personal preferences, a single question was posted on the station's Facebook page in an attempt to establish the preference of the targeted users. The results of the content analysis and Facebook question were used to compile a second online questionnaire in order to elicit more detailed user preferences.

Analysis of the online questionnaires allowed for recommendations to be made in terms of the content, structure and layout and appearance of the adjusted version of the radio station website. Since users' subjective preferences and opinions do not always reflect a usable system or website, it is important to objectively measure the usability of the content, structure and layout and appearance. Therefore, a second website was created based upon the results of the online questionnaires and eye-tracking software was used to compare the usability of the real website, to the proposed website. Since eye-tracking allows for the "how"-component to be evaluated without insight into consumer understanding (Bojoko, 2006), this method was accompanied by complementing questionnaire in order to elicit more information on consumer preferences and feelings toward the website.

Table 1 summarises the two-phased methodology, the methods used in each phase and the rationale behind each method. The research methodology was not predetermined, but the researchers were led by the rigorous process and therefore developed a unique set of mixed methods. The following sections will discuss each of these phases of the methodology in detail.

Phase	Method	Rationale	Respondents/participants
Phase 1a	Literature study and Google analytics	Design online questionnaire	
Phase 1b	Content analysis of radio station websites	Design online questionnaire	15 national radio stations' websites
Phase 1c	Open-ended question on Facebook	Design online questionnaire	47 Facebook users
Phase 1d	Online questionnaire	Design adjusted version of radio website	174 respondents
Phase 2a	Experiment: Current VS the adjusted website	Determine current website preferences versus adjusted website preferences	75 participants
Phase 2b	Eye-tracking and observation of original and adjusted website	Determine current website preferences versus adjusted website preferences	75 participants
Phase 2c	Questionnaire after the eye- tracking and observation	Determine current website preferences versus adjusted website preferences	75 participants

TABLE 1TWO PHASES OF RESEARCH METHODOLOGY

Google analytics (Phase 1a)

Data from Google Analytics was employed in this study, as part of the secondary data sources, as it aided the process of determining whether websites provide the necessary informational content to their users. Google Analytics reports based on the OFM website were accessed from one full year. A year's worth of data was used to exclude extreme circumstances or events that might have affected the data, such as a big news event or a presenter that left the radio station, possibly affecting the number of blog views.

Content Analysis of radio station websites (Phase 1b)

A detailed content analysis was conducted on 15 South African national radio stations' websites. The results were used to develop the new online questionnaire, used during phase 1d.

Open ended question on Facebook (Phase 1c)

The following open-ended question was posted on OFM's Facebook page during July, for 10 working days: "If you visit a radio station's website, what do you want to see?". Forty-seven of the 27 792 Facebook users who had liked the page, responded to this question. Though it was a small percentage of respondents, saturation could be achieved as the same preferred content was identified on the radio station. Not only did consumers want to acquaint themselves with the latest news and enter competitions, they also wanted access to blog posts, information regarding the DJ, the music that was being played, the features that would soon follow and anything relevant that was referred to or mentioned on the radio station. The results were also used to develop the online questionnaire used in phase 1d.

Quantitative Online Questionnaire (Phase 1d)

An online questionnaire was constructed based on the above mentioned content analysis and open ended Facebook question, as well as on secondary data collected on user preferences with regards to the

content and design of radio station websites. The questionnaire consisted of a demographical section (gender, race, internet access and use with specific reference to radio station websites) and a section relating to the content users would prefer to see on the radio station website – the reason for ultimately visiting a radio station website. In the last section respondents used a 5-point Likert-scale to rate the functions that they would use upon visiting a radio station website. The link to the online questionnaire was posted on the radio station's website. During the pilot phase of the questionnaire, 21 respondents completed the questionnaire after which minor changes were made and the amended questionnaire was reposted on the website. The population consisted of individuals who visited the OFM radio station's website during September. The majority of the 174 respondents were female (65.5%) and in terms of the age distribution, 35% of the participants were between the ages of 19-24, 27% were aged between 25-34, 19% were between the ages of 35-44 and 19% were 45 and older.

Eye-tracking, observation and questionnaires (Phase 2)

Djamasbi (2014) argued that because eye-tracking software is able to capture that which catches a user's eye on a visual display, it can provide valuable insight into consumer preferences and behaviours when designing a website. "Therefore, eye-tracking has the potential to become an industry-standard for designing and developing websites" (Djamasbi, 2014:50). Bojoko (2006) recommends using eye-tracking mechanisms to provide additional measures that can be used to compare alternate designs of the same website, as no standard gaze-pattern exists and the eye-gaze must be compared with another design (Schiessl, Dud, Thölke and Fischer, 2003). Furthermore, eye-tracking is a valuable addition to any usability study as a means of enhancing qualitative usability metrics, however, more information is required on how to analyse and interpret the data (Manhartsberger and Zellhofer, 2005). The eye-tracker was considered an appropriate tool as this study aimed to compare two different designs of the same website. Additionally, this study was interested in determining whether the preferred information was ever noticed by the participants, thus the eye-tracker assisted in providing these answers, even when considering only a single site.

This section identified the preferred website content, website structure and layout and website appearance by using eye-tracking to track users' behaviours and to determine which elements attract their attention, in order to ultimately design a website according to the consumers' preferences. Seventy-seven participants took part in the study, but two data sets had to be discarded due to the eye-tracker that could not detect their eye movement. With the target population consisting of OFM radio website users and none-users a non-probability convenience sample was used to source participants. Advertisement on the radio station as well as the radio station website invited the current audience to participate in the study. This sample was independent from that of the online questionnaire.

Two groups of participants' eye movements, behaviours and thoughts, obtained through think-aloud and interviews, were recorded and analysed (as in Djamasbi, 2014). The first group of 31 participants' preferences were tested on the original website (Figure 1) of the radio station and consisted of 53.8% females and 46.2% males. 60% of the respondents in this group were regular users of the website and the other 40% were non-users. The second group (44 participants) viewed an adjusted version (Figure 1) of the radio website (based on previous literature and the feedback from the questionnaire (Phase 1d)). This group of which 55% were regular users of the website and 45% were not, consisted of 75% females and 25% males. The following elements were adjusted on the second webpage: a language option was provided, a search button was incorporated, a news block was added above the fold, an enlarged 'listen live' button was constructed, and both the competition and podcasts sections were moved up. All of the respondents were listeners of the OFM radio station. The findings of this experiment were compared in order to determine the consumers' preferences.

FIGURE 1 DIFFERENCE BETWEEN THE TWO VERSIONS OF THE OFM WEBSITE THAT WERE USED IN THE EYE-TRACKING EXPERIMENT (LEFT: ORIGINAL HOMEPAGE, RIGHT: ADJUSTED HOMEPAGE)



Participants were allowed to view the website for 2 minutes per task, but in alignment with Josephson and Holmes (2002), Pan *et al.* (2004) and Cyr *et al.* (2010) only the first 15 seconds of viewing were analysed except for the first task of which the entire 2 minutes were analysed. Two paper-based questionnaires were administered, one before participants viewed one of the website structures, and one after completing all the tasks (Phase 2c of the study). The first paper-based questionnaire gathered demographical information, as well as information about their familiarity with the OFM website. Thereafter, it was required of each participant to complete the following nine tasks on the website within a two-minute time frame allocated for each task – all related to literature and the results from our online questionnaire: 1) As a loyal user of the OFM website, browse and play around on the page as you would do in the comfort of your own home or as you would do on a normal workday. 2) Establish the latest news headlines. 3) Determine the minimum age to participate in the SKYBOX competition. 4) Listen to the live broadcast of OFM radio station on the website. 5) View the photos of the Gariep Arts Festival. 6) Listen to Johrne's interview with Corlea Botha on the 11th October in which she shares her Skouspel experience. 7) Access the latest rugby news. 8) Determine who is the sales representative of the Northern Cape. 9) Establish which vacancies are available at OFM.

The second paper-based questionnaire covered dimensions that related to website design and layout. Participants had to raise their opinion on eight open-ended questions that related to their preferences of the website. This was done in order to obtain an enhanced understanding of some of the unanswered questions from the previous data. For example, according to Google Analytics the audience visited the podcasts regularly, but when the respondents were asked about podcasts in the online questionnaire, a low rating was obtained. We therefore asked the question, "What is a podcast?". Additionally, the participants had to rate 29 statements based on the website content, website structure and layout and

website appearance, on a 5-point Likert-scale ranging from strongly agree to strongly disagree. The participants were also asked to identify social networks and advertisements that were on the website. The standard length of an experimental session was 30 minutes.

A Tobii T120 eye-tracker was used to conduct the eye-tracking. The computer employed had a quad core i7 processor with 6 GB of RAM. A second screen was used by the facilitator to follow the eye movements of each participant and monitor the status of eye-tracking. The equipment was arranged in such a manner that the facilitator could see on the participant's screen, but the participant would not be distracted by the facilitator's actions. Analysis of the data was done with Tobii Studio 2.0.6 and all eye-tracking images shown in this paper were generated with this software. Participants were also asked to think out loud. A Logitech webcam with a built-in microphone was used to capture participants' facial expressions and verbal feedback. During each session the facilitator made notes of each participant's path that they followed in completing each of the nine tasks.

RESULTS AND DISCUSSION: CONTENT

The following nine main categories were identified through content analysis: User-based information, station information variables, news/entertainment information, contact information, photos, videos, promotional tools, advertisements and interactivity functions. The Facebook open-ended question revealed that consumers would prefer to see news, a 'listen live' feature, music, artist information, music that is still to be played and more information regarding the programs. This confirms the findings of prior studies, which found that there are two distinct groups of users of a radio station website, namely those who visit the website to listen to the broadcast and those who visit the website to read the news and be informed. However, the primary reason for visiting the site was to seek information (Moody, Greer and Linn, 2003), in this case the information seeking could be through news bulletins. The desired features were all available on the original website contrary to previous studies (Potter, 2002) which found this was not always the case. However, it still had to be determined whether these features were usable on the website, which requires in-depth user-testing. These different categories were all combined with the nine categories from the content analysis in the online questionnaire.

The results from Google Analytics showed that for this specific website, blogs and news pages had the highest page-view scores. Therefore, the objective measures in this instance confirm the subjective opinions obtained from the questionnaire and confirm prior studies as well (Moody *et al.*, 2003). The homepage had the highest number of views, followed by blogs, the landing, listen live, classifieds and the news pages – scoring the eighth highest number of page-views. Additionally, results indicated that the news page was also the top landing page with 16.64% of the total first page-views. Analysis of web users' reasons for visiting the OFM website indicated that news (55.2%) and competitions (58.6%) were the most alluring features. The news section was also identified as the first content users want to see when they enter the OFM website with 51.7% respondents indicating as such. News headlines and articles were found to be the most sought after features on OFM's website closely followed by blogs. The analytics showed that blogs occupy four of the five page views, which was inconsistent with the results from the online questionnaire indicating that only 20.7% of the participants required this feature. This result illustrates the advantage of using multiple-methods as the importance of blogs would have been missed if only one or two methods were not used.

According to Google Analytics, the 'listen live' page had a number of 227 874 views, while the classifieds section's page-views amounted to 205 464. Both these categories tested low in the online questionnaire. Podcasts received a total number of 14 835 page-views with an average time of 35.5 minutes spent on the page. Contrary to the Google Analytics results, the online questionnaire indicated that respondents regarded podcasts to be of very little importance. This led to the question: are web users familiar with the meaning of the term "podcasts"? This question was therefore added to the experiment in phase 2 in an attempt to gain insight into consumers' understanding, again an advantage of using multiphase design methods.

An exploratory factor analysis were conducted on the 23 identified features in the online questionnaire. Based on the results six groups were identified and grouped as: information related to the radio station, information not related to the radio station, entertainment and interaction, ease of use and information content. Seven items were grouped under information related, and scored 0.870 on Cronbach's Alpha reliability test; six items were grouped under information not related, and a score of 0.846 was obtained; six items were grouped under entertainment, and scored 0.725 on Cronbach's Alpha reliability test and six items were grouped under interaction, and obtained a score of 0.778. Nine items were grouped under ease of use with a Cronbach's Alpha score of 0.786 and grouped under information content there were 4 items and obtained a score of 0.797.

Information not related to the radio station (such as community news, pictures, news, articles, local calendar, weather, and traffic) and interaction (comments and Facebook-interaction) were the two categories of features on the radio station's website that consumers desired most. Therefore, these features are still considered to be the most important, as previously determined (Edison and Arbitron, 2000; King, 1998; Kraut *et al.*, 1997; Murphy, 1998).

Another interesting result was users' preferences and feelings regarding the advertisements on OFM's website. According to 63.4% of the respondents, users pay attention to advertisements on radio station websites and 75.4% feel that radio stations provide advertisers with decent exposure. This was evaluated in the eye-tracking research and then compared. Users expect advertisements on radio station websites to be trustworthy (89.8%), credible (86.2%) and entertaining (84.8%).

Phase 2: Eye tracking experiment with observations and questionnaire

The second phase of the study consisted of nine tasks that participants had to complete while being observed. The eye-tracking data was captured during this phase. Based on the observation of the first task ("browse the website as you would do in the comfort of your own home or on a normal workday") it was clear that most users read the news or the latest blogs of their favourite presenters, while the nonusers browsed down to the end of the home page to see what they could find. The majority of group 1 (87%), as well as 72% of group 2 stated that the content was satisfactory and that they would not want to see any changes made to the website. Heat maps, which are color-coded visualisation of users' gazes, were extrapolated from the eye-tracking data. The colour red indicates the maximum time spent looking at a specific object in seconds, while orange indicates less time spent viewing an object and green even less. Heat maps (Figure 1(a) and (b)) indicated that consumers view the 'news' and 'competition' links on the navigation toolbar, on both the original page and the adjusted page. The difference is seated in the fact that on the adjusted webpage the news and competition links were prominent link blocks as opposed to being below the fold on the original page. 'Below the fold' refers to information that is originally below the displayed area and requires scrolling to view, while 'above the fold' refers to any content which is immediately visible and does not require scrolling. It is evident that the news and competition blocks on the adjusted page attracted a lot more attention compared to the original page as a result of the positioning. Users indicated a high preference for news and competition related information and it is therefore important that these are prominently displayed as in the case of the adjusted design. The eye-tracking data verified that the new placement was indeed successful in increasing the visibility of these features.



FIGURE 2

The areas of interest (AOI) were identified on the two home pages. An AOI is a region around a specific display-element or group of related display-elements on which various metrics are captured (Figure 2 (a) and (b)). On the original home page only 15% of users and 44% of non-users looked at the news block below the fold (Area 1) where as 100% of the users and non-users of group 2 observed the news block (Area 2) above the fold. The second design was therefore more successful in getting the users to focus on the news block – an element which the users deemed of high importance according to the result of the online questionnaire.

The second AOI was the competition blocks. On the original home page 55% of users and 88% of nonusers looked at the competition block below the fold (Area 3) where as 92% of the users and 100% of the non-users of group 2 noticed the competition block (Area 4) above the fold. Once again, the second design was more successful in terms of focusing the users' attention on the competition block – an element which, according to the online questionnaire, users consider to be of high importance. The podcast block captured more attention on the adjusted version of the website, where 96% of the users and 100% of the non-users gazed at the block (Area 8) within an average of 17.7 seconds. This is a noteworthy improvement compared to the 55% of the users and 88% of the non-users that noticed the podcast block (Area 7) on the original webpage, which appeared below the fold. Moreover, the podcast block on the original site was only noticed for the first time within an average of 21.05 seconds. In addition, the results of the open-ended question "What is a podcast?" indicated that 44% of all the participants did not know the meaning of the word 'podcast'. According to the chi-square test there is a significant difference between the different age groups (0.031). Forty-two percent of the participants between the ages of 19-24 knew the term podcast, while 76% of participants aged between 25-34 could explain the term correctly and 60% of the older participants were familiar with the term. The 'listen live' feature was viewed by all age groups.



FIGURE 3 AOIS: (A) ORIGINAL DESIGN AND (B) ADJUSTED DESIGN

With a mean of 3.26 for the statement "I would prefer that the radio station offers different language options" it is evident that participants would prefer having control over the language the website should be in. Since the geographical region that the radio station serves is multilingual and the radio station itself is also bilingual, this result is understandable. The eye-tracking data shows (see table 4.1.) that 88% of the participants and 86% of the non-users fixated on the language option button. The eye-tracking research also indicated that a search bar is a feature preferred by most users as participants agreed that a radio station website should have a search bar. According to the AOI for the search bar, 96% of website users and 100% of non-users fixated on the search function. Consequently, users prefer a search bar and focus their attention on it. The four statements on the information provided on the

website (amount of information, variety, relevancy and whether it is recent and new) scored an average mean of 4.18 with no significant difference between the groups, the users and non-users or any of the other demographic factors. There was also a general satisfaction with the content on the website with a mean of 4.15, with no significant differences between the groups.

Feature	Original Design		Adjusted Design	
News	Fixation	Time to Fixation	Fixation	Time to Fixation
OFM USERS	15%	206.48 sec	96%	3.62 sec
NON-USERS	44%	200.11 sec	100%	5.95 sec
Competitions	Fixation	Time to Fixation	Fixation	Time to Fixation
OFM USERS	55%	92.62 sec	92%	22.91 sec
NON-USERS	88.84%	75.69 sec	100%	30 sec
Listen Live	Fixation	Time to Fixation	Fixation	Time to Fixation
OFM USERS	90%	96.68 sec	88%	34.33 sec
NON-USERS	94.44%	43.44 sec	91.30%	47.59 sec
Podcasts	Fixation	Time to Fixation	Fixation	Time to Fixation
OFM USERS	55%	317.69 sec	96%	16.21 sec
NON-USERS	88.33%	104.80 sec	100%	19.18 sec
Search Button	None for the original page		Fixation	Time to Fixation
OFM USERS			96%	170.32 sec
NON-USERS			100%	56.18 sec

TABLE 2FIXATION TIME ON DIFFERENT FEATURES

RESULTS OF THE DIFFERENT METHODS: STRUCTURE, LAYOUT AND APPEARANCE

Phase 1: Literature review, Google analytics, Content analysis, Open-ended question and online questionnaire

Nielsen's (2006) eye-tracking research demonstrated that users read web content in an F-shaped pattern. The heat maps of OFM's different homepages both indicated the general "F" eye movement pattern (Figure 1). It is evident from previous research, and supported by this eye-tracking research, that users do not read all of the content on a webpage. The most important information should therefore be placed in the first two paragraphs or in other areas of interest (Nielsen, 2006).

Respondents in the online questionnaire indicated that they would like to see the following features immediately (above the fold), in order of importance: news, competitions, music playing, the presenter, playlist, listen live and blogs. According to Google Analytics, the most-viewed pages are the home page, blogs, the landing page, listen live, classifieds and news. Again by using two different methods

the researchers were able to gain different insights into the consumer preferences. The difference in results between the analytics and customer preferences indicated through the questionnaire, for news and competitions could possibly be due to the position of these features below the fold of the original design.

Phase 2: Eye tracking experiment with observations and questionnaire

The eye-tracking results confirmed the importance of news and news features. The respondents extensively focused their attention on the news links appearing on the navigation toolbars of both web pages. The news block at the bottom of the original homepage did not receive much attention as it was placed below the fold. The heatmap of the adjusted page clearly shows that users were drawn to the news block that had been added in the top half of the page and that users also spent time reading and studying the block. The adjustment therefore had the desired effect, particularly when analysed against the backdrop of respondents listing news as an important feature for a radio website.

The competition block and podcast block added to the top half of the adjusted homepage attracted more attention than the respective blocks on the original homepage. Nielsen's (2007) eye-tracking data was proven accurate in the eye-tracking research. The fact that news, the most sought after feature on OFM's website, could now be found above the fold adds to the effectiveness of the adjusted homepage.

Several open-ended questions were asked in the post eye-tracking questionnaire to evaluate participants' satisfaction with the content and design of the webpage. The majority of users were satisfied with the content on OFM's website, some participants did however, propose some changes to be made.

Layout and design evoked quite a few responses. The opinions of all the users were grouped and a few recommendations were noteworthy. Almost half (43%) of the participants, felt that the homepage was too cluttered and busy. One of the main reasons for the page appearing cluttered could be attributed to the advertisements. One-third (32%) of the participants stated that they were distracted by the advertisements, even though they did not pay attention to them and could not recall which advertisements they saw. This phenomenon is referred to as 'banner blindness' since web users are conditioned to ignore any elements which they perceive to be advertisements. Most of the participants would prefer a homepage without any advertisements as the layout would be simple and clean. Moreover, 28% of the respondents felt that amount of information provided on the homepage should be reduced. The findings suggest that a visible improvement can be measured on a user-based website design. Consumers' perceived preferences were substantiated by various results in their eye movements.

CONTRIBUTION AND MANAGERIAL IMPLICATION

Radio station website managers have to manage their website's content, structure and layout and appearance in order to make a substantial impact on a daily basis. Luckily there are several resources available, such as Google Analytics and eye-tracking, through which managers can determine the preferences of the audience. The study confirms the value of eye-tracking in a multi-method experiment, when comparing two designs of the same website, as identified in prior studies (Djamasbi, 2014; Bojko, 2006). Furthermore, the current study has extended the results to include the value that eye-tracking can add to single designs, by illustrating that the data can indicate which areas of a single design are noticed, as well as the extent to which those specific areas are noticed (Djamasbi, 2014; Cowen, Ball, and Delin, 2002). This not only allows for usability problems to be identified, but also enhances the study by confirming whether or not users actually notice those features which they deem important. Additionally, valuable insight was gained into how this technology could be used to enhance and interpret measures that were captured by means of other usability techniques – a shortcoming in this area identified by Manshartsberger *et al.* (2005).

The importance of the informational content – which was identified in a prior study (Moody, et al.,

2003) – was confirmed with the results from the open-ended question, as well as the eye-tracking data which indicated the link was viewed by the majority of the users in both designs. While it was found that the desired features were indeed reflected in the original design, the mere presence of those factors do not necessarily reflect usability. Radio station website managers should therefore not only focus on content, but realise the importance of the structure and layout and appearance of a radio station website. Thus, a multi-method eye-tracking experiment could once again be used to strengthen the study by negating the shortcomings of a single method.

Consumer behaviour research can benefit from a multi-method experiments as it can lead to a more accurate reflection of consumer preferences. Not only does the combined use of different methods often result in an enhanced understanding of the consumers' preferences in terms of the content and design of a radio station website, but in some instances it also confirms the results of another method.

By using this multiple-methods during the first phase of the experiment, it highlighted some discrepancies in consumer preferences such as the Google Analytics results compared to the results of the online questionnaire in terms of the importance of blogs. In addition it also strengthened the results in instances where the same conclusion could be drawn from the results of the different methods. In some instances consumers' eye movements contradicted that which they indicated as a preference in the online questionnaire. However, the second phase of the methodology allowed for unanswered questions and the contradictory results to be further investigated. Additionally, it confirmed certain findings such as the need for a language option and a search button, as well as the importance of news and news features as indicated by the results of the eye-tracking and post-questionnaire.

Lastly, when using content analysis and questionnaires in combination, the results are still unable to determine the consumer preferences. This shortcoming was negated in the current study in that participants were required to complete a questionnaire specifically aimed at eliciting preferences and then testing those preferences in an objective manner by means of using eye-tracking software.

CONCLUSION AND FUTURE RESEARCH

Future research can examine the opportunity of community building through a website by analysing the interaction between audience members of a radio station. Mehrabian and Russell's Stimulus-Organism-Response model can be used to test the effect that the website quality (stimulus) has on the interaction (response). Another recommendation for future research is to investigate how radio presenters can use the community interaction to guide their program content.

Multi-method experiments can enhance the understanding of what the consumer wants. The value of eye-tracking and website development must be recognised

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