

## Online journalism: A case study of interactivity of mainstream online news websites of the Maldives

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*ABSTRACT Internet has emerged as a hybrid-publishing platform. Thus, communication technologies are challenging the linear print journalism format with interactive devices turning online journalism into a rich media environment. While communication technologies have enabled publishers and media producers to use numerous interactive features in the constructed presentation of online news, few news websites in the Maldives are maximizing such features. This study, based on a content analysis of three mainstream news websites, develops an interactivity index and examines the interactive features of the news websites and analyses how news is presented and to what extent the various publications differ in their application of interactive devices in online journalism. The findings show that the news websites did not fully utilize and enhance interactive features in online journalism.*

*Keywords: interactivity, online journalism, participatory journalism, Maldives*

### Introduction

The development of the internet ushered a new global media revolution, launching a communication paradigm that is characterized by convergence, many-to-many communication and interactivity. Internet emerged as a hybrid publishing platform for online newspapers as it is interactive and facilitate content rich media for media users (Briggs, 2013; Dube, 2005). With the first web-based online news websites launched in the mid-1990s, in the United States of America (USA) the Star-Tribune launched its website in April 1994 while in Britain the online edition of The Daily Telegraph was launched in late 1994, the growth of online newspapers has been tremendous. By May 1995 there were 150 newspapers worldwide with online editions (Greer & Mensing, 2006).

Major global news events in the 1990s also exemplified that the emerging new media platform was an important channel for news dissemination. As noted by Monaghan and Tunney (2010) the Oklahoma bombing, the Trans World Airlines Flight 800 crash and the death of Princess Diana were key moments when immediacy and interactivity of online journalism outpaced the print newspapers and media publishers began to rethink about the importance of online journalism.

With developments in the global internet infrastructure, easier and speedier access, and growth of networked mobile devices the internet has been redefining journalism and the news industry (Alterman, 2011). Some

of the key advantages of internet-based media over traditional media include more audience control over content, time and place of access, immediacy, audience participation, multimedia capability, nonlinearity and interactivity (Foust, 2011). These features and facilities inherent in online newspapers have undermined the print journalism models in developed and developing countries.

The traditional top-down model of print journalism has been made irrelevant, empowering media users in a bottom-up model of communication (Briggs, 2013; Chung, 2007). As noted by Chung (2007) the widespread use of internet as a medium for news production and consumption, “participatory journalism can change the current top-down journalistic model to a bottom-up phenomenon of information distribution” (p. 44).

While theoretical models of interactivity have been discussed and developed over the past 15 to 20 years online news websites have over the past 10 years taken innovative approaches to online journalism facilitating many interactive features for media users (Chung, 2007). With the widespread use of the digital media platforms, online news consumption has increased in developed countries such as the USA (Pew Research Center, 2013). While there is a decline in the percentage of people using radio and print newspaper as a main news source over the past two decades in the USA, a 2012 Pew Research also shows that 39 percent got news online or on a mobile device (Pew Research Center, 2012).

With the rapid increase in mobile phone use, it is not surprising that users in the Maldives are mostly using mobile phone and tablets to access news websites. According to the Communications Authority of Maldives (2013), there are more than 620,000 mobile subscribers as of July 2013, a five-fold increase from the 113,000 figure in 2004. The Maldives is following similar trends in use of mobile phones for media consumption. According to web analytics data provided for this study by Haveeru.com.mv, access to the website using mobile phones and tablets has increased over the years. In September 2012, 85 percent of the traffic to Haveeru.com.mv came from desktop, while the percentages for mobile phone and tablet were nine percent and six percent respectively. However, in September 2013, the percentage for desktop access dropped to sixty nine percent while access via mobile phone accounted for 24 percent of the traffic and the percentage for tablet was seven (Rameez, personal communication, October 7, 2013). More people are now consuming news on the go, and with the growth of mobile devices and smartphones the media landscape will change empowering and including users in the news production processes.

The success of online newspapers in the future depends on their ability to maximize the interactivity of news websites. Unlike in the traditional print newspaper, the application of new technologies in online journalism will also empower consumers in the interactive journalism model that reflects many-to-many communication (Glocer, 2006). Users are able to actively engage in the news process by submitting news tips, photos, and videos and by commenting on news stories. User comments, research shows, have become “popular and widely used forms of participatory journalism” among some of the news websites (Reich, 2011, p. 97).

In online journalism news can be presented in a nonlinear format, with related textual links, interactive graphics, photos and videos that would add many layers to the story. Nonlinearity, facilitated by hypertext, is an important characteristic of the internet that facilitates interpersonal and content interactivity (Foust, 2011). The online newspaper “story formats are considered nonlinear if their structure and navigation scheme facilitate and encourage nonsequential reading” (Lowery & Choi, 2006, p. 101). Compared to print and even broadcast media, which are “one-way carriers of messages and inherently linear” (Heinonen, 2011, p. 36), the options and features in online news websites that engage and attracts users are numerous and thus provide “more gratifying content and personalized services” (Zeng & Li, 2006, p. 139).

News consumers are also empowered with immediate or delayed responses to editorial content, thus enhancing the interactive news environment. While the online news media have the potential for interactivity, online newspapers are slow to maximize the opportunities on the web-based media. An earlier comparative research of websites of major newspapers shows that interactivity is much higher in websites in developed countries compared to less developed countries (Rafeeq, 2003). Studies also show that some media companies are allocating resources to create highly interactive news websites while some are “still in a stage of pre-interactivity” (Fortunati, O’Sullivan, Raycheva, & Harro-Loit, 2010, p. 58).

This paper examines the interactive features of mainstream news websites of the Maldives and analyzes how news is presented and to what extent the various publications differ in their application of interactive devices in online journalism. The level of interactivity of websites was also measured using several dimensions of interactivity that looked at the options available for media users to enhance their media consumption experience, facilities for interpersonal communication and participation in the news process (Heeter, 1989; Spyridou & Veglis, 2008). Given the role social media have more recently begun to play in the interactive communication process the dimensions were also revised to accommodate these developments (Pew Research Center, 2011; Lavrusik, 2011). The digital media industry boomed and social media played an immense role in the user engagement in the news (Vocus Marketing, 2013).

As noted by Hermida (2011), while the new information and communication technology has turned traditionally passive readers to active media users, the opportunities offered for participatory journalism in online newspapers in the Maldives are limited. Only when news items are posted on the websites do users get the opportunity to express their views on stories by filling out the comments form at the bottom of the news item.

### **Interactive Journalism**

Interactive journalism involves the process and publication of news and information content through the interactive and multimedia features of the internet, which are “two of the most salient capabilities of the new media” (Boczkowski, 2004, p. 199). Such features include content rich media such as animation, audio and video, tools such as chat, comments, user-feedback, forum, related news links and other news tools. Unlike the one-to-many

news model used by the print and broadcast media, interactive journalism provides media consumers more personalized or conversational content. The importance of interactivity is noted by Briggs (2013) who had argued that “[t]he power of the Web comes from its interactivity” (p. 274). Users are able to maximize gratification and experience through interpersonal and content interactivity.

To fully utilize the potentials of the internet, news organizations must make news websites interactive and dynamic. Only then can they “trigger a paradigm shift in mass media by challenging the traditional unidirectional flow of messages through features that provide bi-directional or even multi-directional communication” (Chung, 2007, p. 43).

With multimedia appeals and immediacy of news dissemination, online newspapers are becoming important sources of information and new communication technologies will define the future of journalism, both online and offline. As Garrison and Dibeau (2001) believe the development of internet and web technology “may become the most significant change in world communication in a half-century or longer” (p. 88). A higher level of interactive journalism is already taking shape on the web, and when fully realized media consumers will be totally ‘immersed’ in a virtual interactive media consumption experience (Nolan, 2003). Online media users also see interactive features and options positively assuming that it brings “motivation that in turn can stimulate learning from news” (Opgenhaffen & d’Haenens, 2011, p. 9). With easier access to technology, resources and skilled media professionals, online news companies “[a]cross the developed world ... are transforming their online operations, with text and still images increasingly augmented by a more kinetic mix of media” (Thurman & Lupton, 2008, p. 439).

In a recent interactive story of the leaked USA National Security Agency files, The Guardian website used data visualizations, videos, social media integration, documents, and animated GIFs to simplify a complex story. The success of this multimedia packaging of the story was attributed to a “culture of interactive journalism inside a news organization” (Ellis, 2013).

With the interactive journalism culture, online journalism is evolving, and ever changing driven by technology, user-participation and media consumption habits (Allan, 2009; Deifell, 2009). In the future new forms of information and communication technology will further revolutionize newsgathering, processing, packaging and delivering (Briggs, 2013; Rosencrance, 2004).

Web technology permits digital publishing of text, audio, video, graphics and other content-rich media. Newspaper websites in the USA are also providing more online video, some produced in-house while others sourced from TV networks and news agencies such as Reuters and the Associated Press. A recent research shows that more than 95 percent of the top 40 daily newspapers use video on their online editions (Romano, 2006). The distinction that existed between news websites operated by TV channels and print newspapers are receding as news websites irrespective of their origin in broadcast or print focus, on interactivity and multimodality of content.

Given the technological developments that facilitate easier and speedier production of content-rich media and availability of internet-enabled communication devices for media users, the news websites are “responding

to the increased sophistication of online readers, providing more multimedia features, deeper content, and more frequent updates” (Greer & Mensing, 2006, p. 30). In this developmental process, interactivity of news websites continues to be a major dimension (Crnic & Vobic, 2013; Himelboim & McCreery, 2012; Karlsson, 2011; Thurman & Hermida, 2010).

### **Review of Literature: Interactivity**

A study of the interactivity in online news media can be done by conducting a functional analysis of the web pages. As Heeter (1989) has suggested interactivity resides in the features of a communication medium. McMillan (2002) and Massey and Levy (1998) used Heeter’s conceptual definition of interactivity and content analyzed websites for interactivity based on the presence of functional features such as e-mail links, feedback forms and chat rooms. As the model developed by Heeter was based on human-computer interaction, about five years before web-based newspapers emerged, the scholarship on interactivity has shifted in the developed countries with the focus on social dimensions and other communicative variables. As noted by Pavlik (2013) the next few decades would be “an exciting and productive period in media scholarship with research emerging from an interdisciplinary arena of investigations” (p. 10) as convergence of media and hybridity will transform media production and use.

Recent studies on interactivity also suggest that the developments in communication technology and media consumption habits of users have not made irrelevant the need for scholarly discourse on interactivity (Crnic & Vobic, 2013; Steensen, 2013; Himelboim & McCreery, 2012; Larsson, 2012; Karlsson, 2011; Thurman & Hermida, 2010). Furthermore, as some countries are at different interactivity stages vis-à-vis an online journalism study of interactivity is important for developing societies where web-based media are at “pre-interactivity” levels (Fortunati, et al., 2010).

Research of Slovenian news websites has shown that there was a “slight decline in the diversity of interactive features available on respective news websites in comparison to previous research”(Crnic & Vobic, 2013, p. 373). However, another global study by USA researchers that examined the use of interactive features in news media websites of 100 news organizations from 30 countries show that “news media preferred applying features that allow users to interact with content, but without the ability to influence it. In addition, the use of features was tightly related to the technology associated with a news organization” (Himelboim & McCreery, 2012, p. 427). Current and previous studies clearly indicate that interactivity dimensions varied across media organizations and countries with some at very advanced stages while other at a takeoff stage of pre-interactivity.

As Heeter’s examination of interactivity was one of the first seminal works on human-computer interaction in relation to media use, several studies have used that model in the study of online news websites. Using Heeter’s six dimensions of interactivity Kenny, Gorelik and Mwangi (2000) content analyzed the homepages of online newspapers. They examined all of the news elements, including news stories with hyperlinks, photos, video, audio, and other media

supplied by journalists and other content provided by online readers. Massey and Levy (1998) only used four of Heeter's six dimensions of interactivity in a study of interactivity in South Asian online newspapers, arguing that not all of them were relevant given the changes that have taken place in online journalism. They opted to omit 'effort users must exert' and 'monitor system use', and added another dimension, 'immediacy', which was conceptualized as "the extent to which journalists are leveraging on the internet's technology to publish, at anytime, the most up-to-date news" (Massey & Levy, 1998, p. 139).

Paul (2001) used seven dimensions of interactivity – Heeter's six and Massey and Levy's immediacy dimension – in a study of homepages of disaster relief websites. The study, in which the unit of analysis was the homepages, showed that slightly more than half (53 percent) of the websites exhibited moderate levels of interactivity, including both choice of content and interactive design strategies. While 20 sites contained low levels of interactivity, only ten sites showed high levels (Paul, 2001).

However, Shultz (1999) used different dimensions to examine the level of interactivity of online news media. Taking a functional view of interactivity, he studied the availability of features such as e-mail, chat room, online polls or surveys and forums. The findings of this study showed that many news organizations infrequently exploit interactivity of the new medium, but not all websites were necessarily interactive (Shultz, 1999). Another research into interactivity found that six percent of online newspapers contained hyperlinks; 49 percent of reporters answered their e-mail messages and 64 percent had search engines (Kenny et al., 2000).

Xigen (1998) used the interactivity model to study the use of graphics and 'interconnected news links' in online editions of three major USA newspapers, USA Today, New York Times and the Washington Post. Arguing that online newspapers can be read only under an interactive environment, he says that when designing a webpage and setting guidelines for graphics use in the news website, interactivity is a key element to be considered and represents a shift of balance of communicative power from publisher to audience (Xigen, 1998).

Some online newspapers create content, exclusively for the internet editions, which puts such websites far ahead of the conventional print media in some aspects. Since newspapers began publishing on the web in 1994, online news content has evolved through three stages (J Pavlik, 1997). The first stage involves repurposing print newspaper content for online edition, while in the second stage content is augmented with interactive features such as search engines, hyperlinks and some customization of what users must receive. In the third stage there is original content exclusively crafted for the online newspaper (Pavlik, 1997).

To fully maximize the potentials available on the internet and make online newspapers interactive and exciting value-added services such as side bars, extensive background pieces, graphics, sound, video, archived content, links to other resources or other online papers and interactivity found in e-mail and e-commerce need to be made available on the web newspaper (Peng, Tham, & Xiaoming, 1998). Connecting users to related news by hyperlinks is an important tool given that it directs consumers to relevant blocks of information. While some news websites use external and internal hyperlinks,

the latter is more popular in news websites (Opgehaffen, 2009).

Research also shows that the most popular forms of interactivity are medium interactivity features such as multimedia content (audio, video) and search (Chung, 2007). Referring to dual-coding theory where verbal and visual information are two cognitive stores in human memory Opgehaffen and d'Haenens (2011) argue that "the combination of visual and verbal cues stimulates news users to store information ... verbally and visually. As a consequence, the multimodal news is double encoded and double-learned, resulting in better news recall" (p. 10).

In a content analysis of news websites, Chung (2004) found that interpersonal exchange options and human interactivity features were used the least extensively compared to other medium interactivity features such as audio and video download files, multimedia galleries and search features. The websites failed to exploit the feedback loop potential of interactivity on these websites. Chung (2004) concluded that news organizations were unlikely to fully adopt the unique interpersonal communication characteristics of the internet into their practices of news delivery online.

Simply placing a news story written for a print newspaper on the web will not give media consumers the ultimate interactive experience. In developing stories for online publication, journalists need to gather and process and package content incorporating interactive devices. As Dube (2005) suggested "online journalists must think on multiple levels at once: words, ideas, story structure, design, interactives, audio, video, photos, news judgment" when developing content for the online newspaper as online journalism involves "showing, telling, demonstrating and interacting" (para. 1). Visual journalism – incorporating visual devices in the news – is a powerful story telling approach as "text combined with images, are the best triggers of memory and recognition" (Opgehaffen & d'Haenens, 2011, p. 10).

Interactive options on websites can be divided into three types: navigational interactivity, functional interactivity and adaptive interactivity, which provides options to users to personalize (personalization) the website based on certain preferences (Guay, 1995, cited in Deuze, 2001). The most sophisticated form is adaptive interactivity as it allows the website to adapt itself to the needs of individual users. Heeter (1989), who positions interactivity in the structure and processes of the medium, gives a definition that offers specific and measurable dimensions. Under Heeter's classification, personalization can be included within the complexity of choice dimension.

Following are the interactivity dimensions used in this research, some suggested by both Heeter (1989) and Massey and Levy (1998) while the sixth dimension is included by the author considering the powerful role social media such as Facebook and Twitter are playing in the amplification, interaction of mainstream news.

- (1) Complexity of choice: An online newspaper, that is low on choices, might only offer a news story as it is, without related links, photos and multimedia. A resourceful website, however, would give more than that. A story would have related links, related video or audio, reader feedback and discussion

forums. Personalization options offered are also included as choices offered for users.

- (2) Responsiveness to the user: For Heeter (1989), responsiveness to the user is the degree to which the journalists (or editors) can react responsively to the audience. Users can respond and communicate with the newspaper through e-mails, feedback forms and even participate in asynchronous or delayed chat. Providing e-mails of journalists along the news story is an important feature that would allow readers to immediately respond after reading a story.
- (3) Facilitation of interpersonal communication: According to Massey and Levy (1998), facilitation of interpersonal communication refers to the extent to which a news website could present itself as a channel for readers to engage in synchronous or real-time communication with other readers. Such facilities may include chats and forums, where two or more audience members could also engage interpersonally.
- (4) Ease of adding information: Very few online newspapers allow readers to add content directly to the web pages. But many websites do allow readers' feedback on stories through comments, which are moderated by gatekeepers. If readers are allowed to contribute content and add information, they are engaged in participatory journalism. More news websites are channeling comments and other user-generated content facilitating a bottom-up communication process.
- (5) Immediacy: This dimension measures the extent to which online newspapers update coverage of a breaking news event. The higher the frequency of update of a developing news event, the more important the immediacy dimension becomes. Immediacy is one of the fundamental characteristics of online news that distinguishes it from news delivered by print media (Massey & Levy, 1998).
- (6) Social media interactions: There is extensive use of social media such as Facebook and Twitter in the enhancement of the journalism process. Users intensifying the communicative process share editorial content in mainstream news websites widely. This gives an alternative non-mediated space for the public to engage and discuss issues covered by the news websites.

In this research, the interactivity dimensions discussed above were used to measure the extent to which such features were provided in the websites and used in the news items. These dimensions fall within the three forms of interactivity – navigational interactivity, functional interactivity and adaptive interactivity (Deuze, 2001).

### **Online Journalism in the Maldives**

In the early days of online journalism in the Maldives, news websites were very basic in their design and provision of editorial content partly limited by the availability of web technologies, low internet use and access in the country. Today there are more than 20,000 fixed broadband subscribers while the figure for mobile broadband subscribers stand at 109,747 (Communications Authority of Maldives, 2013). The diffusion of internet in the widely scattered islands of the Maldives has seen emergence of more mainstream and alternative

news websites. Over the past 16 years more news websites have emerged some developed by mainstream media organizations while hyper-local websites can be seen serving mainly local audiences in the atolls.

The first online newspaper in the Maldives was Haveeru Online, which was launched in January 1997. Before the internet-based publication was setup, Haveeru also provided limited content electronically to subscribers through a Bulletin Board System (BBS). Setup in 1994, at a time when there was no internet service available in the Maldives, the BBS provided local and foreign news to subscribers who have to establish a dialup connection to access editorial and other content (Rafeeq, 2008). Today Haveeru Online offers a variety of editorial content through a highly dynamic website that can also be accessed through its iPhone application (“Dhe dhuvaa therey”, 2013). Other print newspapers such as Aafathis and Miadhu also launched news websites culminating in an era of online journalism.

However a major impediment to print journalism in the Maldives before 1997 was the daily distribution of newspapers in the atolls. Due to poor transportation networks the print newspaper model centred on serving the capital island Malé. Thus, coverage of events in the atolls was limited while the main focus was on the immediate circulation area Malé.

Emerging news websites eventually narrowed the news and information gap between Malé and other atolls. This was due to increased access to the internet, widespread use of computers and mobile devices. Today all mainstream media organizations, print or electronic, have websites that provide a wide range of editorial content often enhanced by multimedia and other interactive elements.

According to California-based Alexa Internet, which monitors web traffic and provides world and local rankings of websites, Haveeru Online (Haveeru.com.mv) is the first among the news websites in the Maldives, followed by Sun.mv and Vnews.mv. Other mainstream news websites include Miadhu.com, CNM.mv and Raajje.mv. There were many alternative news websites as well as blogs that freely discuss and debate topics that are sometimes cosmetically reported in mainstream journalism.

The levels of interactivity offered by these websites have varied with some providing frequently updated editorial content along with rich media such as photos, videos and news graphics. User interaction in the participatory journalism process was through comments to news items. Comments were popular and provided a public sphere for users to engage in and discuss major political, social and economic issues that are being covered by the websites. As comments were not strictly moderated through rigorous gatekeeping processes, comments platform provided “new and alternative information and as a forms of adversarial journalism” (Graham, 2013, p. 125) and “[t]his opportunity opens up prospects for the visible and public discursive processing of news issues by readers” (Weber, 2013, p. 2).

### **Method and Research Questions**

Two methods were used to measure the level of interactivity of the news websites that have been selected for the study. Content analysis was used to find out how many media-rich and interactive features were used in the news websites. Based on the quantitative data a model was developed applying the

six dimensions of interactivity to create an index that would show which online newspaper is most or least interactive.

Content analysis, which has been used in the study of websites, is a research technique for the systematic classification and description of communication content, which may involve quantitative or qualitative analysis or both (Berger, 2000). For Holsti (1969) it is “any technique for making inferences by objectively and systematically identifying specified characteristics of messages” (p. 14). Content analysis has been widely used in the study of websites and as noted by McMillan (2000), who did 19 studies that applied content analysis to the web, this research technique can be applied to a dynamic media environment such as the internet.

The unit of analysis for the study was the homepages of the online newspapers. This was the main page, or the ‘front page’ of the website, and was the ideal unit for analysis, as it is representative of the various sections of the publication. Only local news items from the homepages were selected for analysis. In analyzing the content on the homepage, for example, hyperlinked headlines were followed to the secondary page, (news detail) and the interactive features used in the item were also coded.

Kenney, Gorelik, and Mwangi (2000) in their study of interactive features of online newspapers used homepages as the unit of analysis. They argued that as websites vary in size, from one page to 50,000 pages, thus coding an entire website would be extremely time consuming. Unlike print newspapers, where the front page or the main page carries fewer news items, online newspapers take a completely different approach in the design and presentation of news content. With frequent updates and changes to the homepages the hierarchy of news, and layout of editorial content is very different from that of the printed newspapers.

The sampling period for this study was 1-30 September 2013. A non-probability sampling was used, as the study does not aim to generalize the findings (Wimmer & Dominick, 2011). The unit of analysis being the homepages of the websites, five main news items, based on the hierarchy, news values and placement were chosen from each news website every day. The total sample for the 30 days was 450 news items. Only local news and in-depth news articles were selected for the research.

Besides the content analysis of the home pages, a qualitative analysis of the features and services provided in the websites were carried out to develop the index of interactivity. Such a measurement would help to determine the degree of interactivity of the websites.

An index of interactivity would illustrate more clearly the overall level of interactivity of online newspapers, as all the various functional features of the websites were taken into consideration in the analysis. Shultz (1999) created an interactivity index in a study of interactive features of USA online newspapers by assigning values to different feedback tools according to their sophistication and significance. While Shultz (1999) gave scores for feedback tools such as e-mail and chat, in this study those features were qualitatively accessed under various dimensions of interactivity. Such a model can be used to measure and present a simplified analysis of interactivity.

The dimensions of interactivity used as categories for calculating the index

of interactivity are (1) complexity of choice, (2) responsiveness to the user, (3) facilitation of interpersonal communication, (4) ease of adding information, (5) immediacy and (6) social media interaction. As the significance level of these dimensions varied, an importance weighting was given to each dimension as shown in Table 1. Variables that were considered when assigning interactivity score for complexity of choice dimension include classification of thematic categories, special coverage of important issues, multimedia content and frequency of updates.

For the second dimension, the features that were assessed include advanced search, breaking news, mobile SMS alerts and RSS feed. The third dimension seeks to evaluate the presence of options for users to engage with journalists or editors. The fourth dimension includes the structural features facilitating interpersonal communication. Comments to news stories, feedback were evaluated under the ease of adding information dimension. Given that social media have become an important space for debating and sharing news headlines and other editorial content, options available for sharing content through Facebook and Twitter were analyzed under social media interaction dimension.

To analyze the interactivity offered in the online news websites the following research questions were asked:

1. What are the interactive features offered in the news websites?
2. How do the different online news websites vary in their levels of interactivity?
3. What is the interactivity index for the news websites?

The above questions were answered through content analysis of the interactive options and tools offered in the websites. The six interactivity dimensions were coded after the content analysis of the websites and the data were used to create an index that would answer the second research question. Furthermore, the websites were coded for the presence or absence of interactive features that were categorized under the six dimensions of interactivity. To develop an index of interactivity the dimensions were measured on a five-point score of Very High (4), High (3), Medium (2), Low (1) and Very Low (0). The final index is a result of an overall assessment of the websites studied for interactive features and options offered.

### **Interactivity Index**

Some of these interactivity dimensions have been used by Heeter (1989), Massey and Levy (1998) in the study of interactivity of websites. In addition a new dimension – social media interaction – was used in this research. Using a scoring method the dimensions were measured on a five-point score scale of Very High (4), High (3), Medium (2), Low (1) and Very Low (0). Using the six dimensions of interactivity as variables, the following formula was used to calculate the index of interactivity,  $i$ :

$$i = \sum_{n=1}^6 p_n \frac{x_n}{4}$$

where  $x_n$  is the score received by a website for the  $n^{\text{th}}$  dimension in a five-point score scale, 4 represents maximum possible score in a given dimension based on the five-point score scale and  $p_n$  is importance weighting of the  $n^{\text{th}}$  dimension which has to satisfy the equation below.

$$\sum_{n=1}^6 p_n = 1$$

An importance weighting was given to each dimension, which varied depending on the level of significance. The highest a website could score in the index would be one, while the lowest a news website could fall to being zero. For example, in measuring the complexity of choice available to online newspaper readers, Haveeru.com.mv was given “Very High”, and assigned the numeric value 4 as shown in Table 1.

Importance weightings were assigned to the dimensions based on the level of significance the dimensions had on interactivity. The six dimensions cannot be measured in the same continuum, as their importance to interactivity varies. Considering that, it was deemed appropriate to treat the dimensions discriminately, thus highest weightings were given to choices available in the website and the immediacy of information and social media interaction.

Table 1  
*Dimensions of Interactivity*

|   | Dimensions of Interactivity                | Importance Weighting | Scores for Haveeru.com.mv |
|---|--|----------------------|---------------------------|
| 1 | Complexity of choice                       | 0.20                 | 4                         |
| 2 | Responsiveness to the user                 | 0.17                 | 3                         |
| 3 | Facilities for interpersonal communication | 0.10                 | 2                         |
| 4 | Ease of adding information                 | 0.17                 | 3                         |
| 5 | Immediacy of information                   | 0.18                 | 4                         |
| 6 | Social media interactions                  | 0.18                 | 3                         |

Content analysis of stories, that appeared on the homepages were carried out to find out how much certain features and media elements were used in the online story narratives. The content analysis explored how much photos, graphics, audio and video the online newspapers used and also assessed the extent to which related links and websites were used to enhance the news item.

## Findings

The content analysis of the websites showed that use of key interactive and multimedia devices along with news content is not extensive. In 450 news items studied, there were only 597 photos used and figures show that most of the news items were accompanied by only one photo. Although use of more photos would enhance news stories 414 items (92 percent) were published with a single photo per story. Among the websites, Haveeru.com.mv accounted for 37 percent followed by VNews.mv (35 percent) and Sun.mv (28 percent). Use of video and audio content with news items is very minimal compared to photos with only 14 video clips used by the websites. Haveeru.com.mv accounted for 50 percent of the videos while the figure for VNews.mv was 36 percent and Sun.mv 14 percent. None of the websites used any audio clips to enhance the news narrative.

Table 2  
*Photos Use, Facebook and Twitter Share and Comments Posted in the Sampled News Items (n=450)*

| Activity       | Haveeru.com.mv | Sun.mv | VNews.mv | Total |
|----------------|----------------|--------|----------|-------|
| Photos         | 221            | 162    | 209      | 592   |
| Facebook Share | 20917          | 10102  | 1382     | 32401 |
| Twitter Share  | 5726           | 2830   | 364      | 8920  |
| Comments       | 6281           | 2011   | 239      | 8531  |

Given that social media is an important part of the media ecosystem, sharing of content through platforms such as Facebook and Twitter not only promotes media content but also creates an interactive process in the social media space. The research shows that most of the news items were shared widely through Facebook and Twitter. There were more than 32400 Facebook likes and 8900 shares via Twitter for the 450 items. There were 20917 likes (65 percent) for the 150 news items analyzed from Haveeru.com.mv. The figure for Sun.mv was 10102 (31 percent) followed by 1382 (4 percent) for VNews.mv. Sharing of news headlines through Twitter were relatively less compared to Facebook. The sampled items have been shared through the micro-blogging website 8920 times. The figure for Haveeru.com.mv, Sun.mv and VNews.com.mv were 5726 (64 percent), 2830 (32 percent) and 364 (4 percent) respectively. The only website that provided options to share photo galleries and videos was Haveeru.com.mv.

Including related links to news items enhances the interactive dimension as media users can easily get relevant information and background to stories through such links. Haveeru Online provided four related links at the end of each news item while Sun.mv occasionally carried relevant news links with the editorial content. There were 600 related links in Haveeru Online stories while the figure for Sun.mv was 16 and none for VNews.mv. The structural interactive features offered in the websites were limited.

Integrating tweets in news stories gives users direct access to primary sources thus enhancing the mediated communication process. However, the study showed that only seven tweets were embedded within seven news items. Haveeru Online and VNews.mv used tweets in sampled stories.

Comments provide an opportunity for users to send in views and information to news websites. Users are also able to engage in with others responding to comments. The research showed that more than 8500 comments were published in the sampled news items (n=450). Haveeru.com.mv published 6281 comments (74 percent), while the figure for Sun.mv stood at 2011 (23 percent). With only 231 comments (3 percent), VNews.mv recorded the lowest number.

The findings presented above answer research questions 1 and 2 and illustrate that the level of interactive features offered by the news websites varied. The findings show that the more established news websites offered more multimedia content. The interactivity index calculated, using the model outlined earlier, indicated that Haveeru Online stood out compared to Sun.mv and VNews.mv. The interactivity index, which is an overall assessment of six dimensions of interactivity, showed that the results ranged from 0.40 to 0.80 where the highest index is 1. Among the three news websites, the study showed, Haveeru.com.mv was the most interactive with an index of 0.82 followed by Sun.mv (0.64) and VNews.mv (0.48). The index for Haveeru.com.mv has increased dramatically compared to similar research conducted in 2002 that did a comparative analysis of interactivity of mainstream news websites of the USA, New Zealand and Maldives (Rafeeq, 2003).

### **Conclusion**

The internet and communication technology have facilitated the creation of a hybrid media environment that is redefining journalism. The opportunities for content producers to provide a better and fulfilling user experience is immense given that technologies have diffused and the audiences are equipped with devices – from PCs to smartphones and tablets – to gratify media consumption. However, this research shows that more interactivity features and options in mainstream journalism are needed. As online newspapers provide a platform where media users can also contribute and engage more need to be done to invite and accommodate user-generated content.

Mainstream media should also acknowledge the power of consumers. Social media interaction is just a small indicator of the power and role of users in the media dynamics. Social media, notably Facebook and Twitter, are not only powerful news referring sources but provide unmediated public sphere for consumers to interact (Olmstead, Mitchell, & Rosenstiel, 2011). Online newspapers should make use of social media to enhance promote and communicate the media messages and products they produce as “the social media boom influenced the media industry’s digital revolution, serving as a tool for journalists and news organizations to solidify brands, promote bylines, seek out sources, and communicate with readers, listeners and viewers” (Vocus Marketing, 2013, p. 3).

Although in some countries there are mainstream news websites that are

in the pre-interactivity stage, as a research by Fortunati et al. (2010) shows, the three news websites studied are in medium to high interactivity stage given that the index score ranges from 0.48 to 0.82. Not seeking out changes in the dynamic media environment and being content with what is in use would be complacency. The emerging trend of more users accessing internet through mobile devices is an indication and clarion call for media producers to shape content and provide services based on the specifics of mobile audiences. Online newspapers should optimize websites for the mobile devices, deliver SMS alerts and develop mobile Apps for key mobile operating platforms.

It is equally important to engage users in all the stages of news production to make mainstream journalism relevant in this highly connected and networked society. As the internet provides a rich media environment the opportunities for growth in serious online journalism is great. To capitalize on these opportunities a culture of interactive journalism is needed (Ellis, 2013). As communication technology is empowering media users the role users play in the participatory journalism process is ever increasing. Integrating user-generated content in the mainstream journalism is also important as this would create a larger and diverse public sphere. Future research into interactive journalism in the Maldives could focus on the changing dynamics of user-generated content and how alternative media are becoming integral actors in the media power play. News website design and media consumption habits are also important topics for future studies.

It is important to develop dynamic, user-friendly websites, increase frequency of updates and provide coverage of breaking news events. It is also equally important to include multimedia such as audio, video and interactive graphics, photos and interactive graphics within the news items, provide blogs, provide channels for user-generated content (including text, and other media) and discussion forums. Enhancing a simple text-only news item with multimedia (video, audio, interactive graphics) “to have a positive impact on perceptions of and attitudes concerning the online” as “pictures and videos can create the experience of being present in distant locations and make a real-life experience possible during online consumption” (Opgenhaffen & d’Haenens, 2011, p. 10). To reach a higher level of interactivity, online newspapers have to consider addressing positively all the key dimensions that would enhance the websites and make the news products attractive, interactive and engaging.

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