

# Bipolar Emotional Response Testing of Online News Website Content: Indonesia Case

Irwansyah

**Abstract**—Indonesia media have concerned with the existence of the Internet. Several printed media created online news website that can be accessed by various devices. However, none of the online news websites were evaluated by any tools. This study proposed to evaluate online news websites based on emotional response of users. By adopting bipolar emotional response, the experiment study evaluated the content from credibility, quality, liking, and representativeness aspects. Results revealed that emotional response of users had various polarization on every aspect of content. This finding shows that Indonesia online news websites have different response emotionally among users from different devices.

**Index Terms**—Online news website, content, bipolar emotional response, polarization.

## I. INTRODUCTION

Printed media starts to concern with the existence of the new media technology, Internet. One of printed media concern is creating news websites that can be accessed online. In Indonesia, *Kompas* newspaper that has circulation of 500,000 exemplars per day and the readership reaches 1,850,000 people [1], creates *Kompas.com*, *Kompas e-paper* and *Kompas Digital*. Another media such as *Harian Republika* that has a 110,000 of readership (*republika.co.id*, 2012), creates *Republika Online* (ROL) within two years after its daily newspaper published. In addition, another printed media such as *Tempo*, published in 1971, creates *Tempo Interaktif* (*tempo.co*). Interestingly, *Tempo Interaktif* can be accessed not only from personal computer but also from other gadgets, such as mobile phone, *BlackBerry*, *IPhone*, *IPad*, and *Android* tablet personal computer (PC) [2].

The concern of printed news media about the creation of online news media version confirms the decreasing number of printed news media readers, such as daily newspaper [3]. For example, the number of printed newspaper readers in the nine big cities in Indonesia decreases from 25.1% to 15% in 2006 while the number of online news readers increases 23% in 2000 and reaches 29% in 2004 [4]. In addition, paid online newspaper readers increase twofold (9%) in 2013 [5]. The existence of newspaper as digital and online news media changes the platform of medium but also the judgement of readers on the content [6]. Online readers found that contents of online news top stories are more various than newspaper [7]. Content variety of online news websites could be

produced by using hypertextuality that gives access to other news from various sources. As a result the news distribution can run easily and fast [8]. However, the speed of online news publication sometimes affects negatively toward news standard [9]. News editors do not have much time to verify the fact of the news [10]. As a result, the content of online newspaper does not have factual evidence and editor checking, and affects the credibility issue.

Credibility issue often appears sequently with the content change in online news media [11]. In addition, credibility issue lies in the initial sequence that determines the quality of the content of online news websites [12]. Gladney et al. also identify other values such as trustworthiness, accuracy, informative and beneficial content which become a part of quality that are appreciated by the workers of online news. As a result, news quality of online media has similar standard with traditional or print media [1]. A good of content quality shows the journalism standard in the online news websites [12]-[14]. Content quality can be seen on how online news writing could deliver the message well [15]. Thus, content quality is also one of important aspects to indicate the performance of online news websites and the readers' experience of accessing news [16], including the readers' enjoyment of online news content [15]. Moreover, the liking of the content shows the affection reaction of any experience [17]. The affection reaction could be feeling of happiness, sadness, or liking [17], [18]. Moreover, Douglas states that the affection experience of online websites readers undoubtedly affects the readers' emotion when having interaction with the websites. Therefore, many online news websites provide interactive feature to make the readers feel involved in news experience [19].

Credibility, quality, and liking could not be separated from the existence of representation [15]. Sundar shows that representativeness could measure the online news perception to all news content. It is identified by using hypertext that correlated with any keywords from all online news website (*shovelware*) [20]. However, the studies about credibility, quality, liking, dan representativeness on online news are still limited to the importance of perception and content. To date, there is no specific study that indicates the level of user's response emotionally as the effect [15]. In the mean time, according to Al-Radaideh, Abu-Shanab, Hamam, & Abu-Salem [21], the study of effect is a part of evaluation study which can explore the way of user to see, feel, and use an online news media website.

The evaluation study focused on the characteristic of emotional response also becomes important to (1) indicate that emotion could be transferred by certain brand and could form a perception and to (2) bring engagement and the ability

Manuscript received June 14, 2014; revised August 15, 2014.

Irwansyah is with the Communication Department University of Indonesia, Salemba, Jakarta, 10430 Indonesia (e-mail: irwansyah09@ui.ac.id)

to remember (memorability). In addition, emotional response could also construct a customer or user e-satisfaction when accessing online website [22]. While accessing online website, the user could be identified based on technology device (personal computer, laptop, tablet or smartphone) and web browser platform (mobile and non-mobile web browser) [23]. Therefore, this study explores the importance of measuring emotional response in various technology devices and platform used to access online news websites.

## II. LITERATURE REVIEW

Nowadays, digital journalism gathers, produces and sends news and information to computer 'literate' readers [24], [25]. The form of traditional media [8] is finally replaced by a new 'form' media with a continuous development of technology [26]. Moreover, Fidler states that there are only two choices that are faced by the media because of the technology development: change or die. However most of the media change to seek a new business opportunity which is not exist yet in the traditional media [25]-[27]. As a result, there are three important things in respect to transition of the media to digitalization era. First, technology of developing media is on the opposite of the current technology. Second, the adaptation of media emerges as a response of the newest form of technology. Third, traditional media choose to cope with newer format and more sophisticated technology [25]. Consequently, digitalization has an implication to the morphosis of the newspaper from previously in the form of printed to be in the form of 'flat screen'-based website. Therefore, news consumption will be no longer in the form of printed paper but moving to be online.

News website is a site that provides information about the latest events or occasion or collaboration of traditional journalism and comments. News website becomes online when it is combined with the form and features of interactivity, hypertextuality, and multimedia. There are three categories of online news websites. The first is the mainstream. It is the online news websites that are the most spread this time and the media is an extension and the second distribution form of traditional newspapers. The second is the independent. It is the online news websites which production and distribution is only on website-based. Third is the index. It is the online search engine or Internet news portal which provides the content from other various online news websites [8].

Online news website has existed since mid-1990s with the presence of World Wide Web [28]. The first service of online newspaper in the United States is the Chicago Tribune's Online that was published in 1992. However, the track of the origin of online news is started from the beginning of 1980s when the Knight-Riders newspaper group and telecommunications company AT&T launched an experiment of videotext which was called Viewtron [29]. Viewtron gave the news in accordance with the requests (news on demand) via a computer and television to customer. While in Indonesia, the early history of the voice information service in text (teletext service) and information service in picture and text (videotext service) was not achieved but it was stated in Law No. 24 of 1997 about broadcasting (State

Gazette of the Republic of Indonesia Number 3701 of 1997).

The importance of the content on the Internet especially digital and online media was delivered by Bill Gate in 1996 by saying "content is king" [30]. Then Chaffey and Mill says that "content is still king" [31]. In the context of online news, media organizations need to give an original and important content that can affect the life and social impact so that the online news media become the prestigious news sources [32]. Moreover, search engine like Google also emphasizes on the importance of the content because it searches for sites which are capable to give high-quality content. The quality also plays an important role in constructing readers' perceptions of the abilities and trustworthiness on website [33].

In terms of content, online media which are able to combine the credibility, high quality information and interactive presentation, will be successful and surviving [34]. For that reason, McIntosh adds that online media must prioritize the quality journalism to get public trustworthiness. Then the content of online news should provide content that has a stronger locality-oriented than one of the newspaper [35] and more like 'shovelware' [6], [35], [36].

Several studies that evaluate the content of online news focus on credibility [37] quality, liking, and representativeness [15]. Study on media credibility shows that the more credibility of media was, the higher use of the media was. Credibility issues are related to the ease of news site to publish news online [8]. Credibility also has a great influence on news, which will decide whether or not the readers believe it [38]. Credibility of news site was proven to have a positive effect on media consumption. The readers of news site only access the site they accept as credible site with a high frequency accessing [39].

Credibility is a variable attributed to communicator by receiver of information [40], [41]. The concept of credibility includes three dimensions: the source, the messages, and the media. Credibility of the source is related to persuasion in the level of interpersonal communication. Credibility of the message focuses on the characteristics that make them credible or not. Credibility of the media is related to trust of the readers toward information, spread by the media. Those three dimensions are used to measure various aspects of the content site of online news. Credibility is often attached to the term "can be trusted (believable, trustworthy), unbiased, competent, credible and skilled." Other dimensions can measure accuracy, relevance and completeness of the content [37].

Components of credibility also can be seen from the type of media and channels used such as a face-to-face conversation, newspaper or web-based information. There are three unique and interesting aspects in respect of online news credibility: (1) whether contents of online news have the same credibility with traditional media (newspaper), (2) what distinguishes the credibility among the media, and (3) how the assessment of media credibility based on the content topics that have been presented is [8]. Measurements of credibility from various media can be performed by comparing the readers' perception of the belief, reliability, justice, unbiased, balance, community relationship, easy usage, completeness, quiet, hospitality, accuracy and interest of each media [37].

To evaluate online information on digital literacy of communication channels, it requires five criteria of credibility: (1) accuracy, (2) authority, (3) objectivity, (4) progressive situation, and (5) scope. Accuracy refers to the level when the news site is free from error either information that can be verified online or reliable information on this site. The authority of the site is considered by assessment of the author's existence and contact information which are provided well personally or in level of organization, belief, qualifications and affiliation of the authors or sources that can be trusted. Objectivity involves an identification of goals of the site and the information provided; that is a fact or opinion that involves the understanding of the commercial purposes, conflict of interest of the source of information, including the relations among them. While now seen from the information delivered is the result of updates. While coverage refers to the overall and into the information provided by this site [37].

Study of quality, liking, and representativeness showed the importance of perception *ratings* in the content of information that is delivered [15]. The site quality is the grade or level of a good or superior communication. The quality can be seen from measurement of the story presented according to the criteria: clarity, coherency, comprehensiveness, evaluation, and a good writing. Indicators for quality of the news media includes financial stability and independent, integrity, social attention, good writing/editing, and power of opinion and interpretive analysis, professionalism and staff intelligence, influential power of opinion leader, expanding readers' education and intellectual, consciousness and emphasis on politics, international relation, economy, social welfare, culture, education and [12]. While the measurement for liking is the affection reaction by involving a feeling to the entire story in this site, and then developed by the criteria of bored, vivid, enjoyable, interesting and fun [17]. Then the measurement related to the representativeness is the summary of the information on the site seen by criteria of important, informative, relevant and punctual [15].

Ratings perception in information content shows cognitive strata of the readers [42]. While the measurement of perception has not been able to show the content polarization, content polarization can be viewed from the measurement of emotional response. Douglas also shows that the emotional measurement is usually performed in studies on consumers and market research. The studies adopt a *Mehrabian and Russell's Pleasure-Arousal-Dominance's scale*, *Plutchik's eight basic emotions categories*, and *Izard's Differential Emotional Scale*. In general, a study of emotion develops two perspectives on psychological study: (1) cognitive perspective and (2) social constructivist perspective [18]. Cognitive perspective assesses emotion as a cognitive function and describes individual response as 'organized syndrome' [43]. Social constructivist perspective states that emotion can only be understood through social analysis [44]. Therefore, emotion could be affected by interpersonal relation, social macro and culture. Emotion is also the result of individual evaluation toward the environment which is considered as positive or negative stimuli. Each person could evaluate stimuli based on the

positive or negative pole such as good or bad, and fun or painful. The result of the evaluation will determine an individual to approach or avoid the source of the stimuli [18].

Several studies has applied emotional measurements on the website. Lai applied elaboration likelihood model and develop the scale of positive and negative affective schedule (PANAS) Scale on a cosmetic site [22] while Douglas applied website emotional design (WED) scale on travel website [18]. Other emotional response studies [45], [46] has been used to reconceptualize and redesign website including to understand users's need and want.

In line with the mobile communication technology development, access of online news website expands from static to *mobile* device. According to the result of the study conducted by Reuters Institute for the Study of Journalism, the use of *mobile device* to access online news continues to increase, especially smartphone. This study also shows a trend of consumption of *multi-platform* online news. One of three men (33%) accesses online news through two devices, and a small number of them (9%) accesses it through more than three devices [47]. As a result, online news website follows the trend to get more potential readers by developing a multi-access site such as personal and portable computer including tablet and smartphone. Multi-access site from various devices give readers and potential user to get news "anytime and anywhere". Moreover, "smarter" mobile phones have features that are able to give alert for any news information updated from the site [48].

Moreover, now mobile phones are equipped with various multifunctional applications such as song player, camera, messages sender, email reader, Internet browser, even television. Our time was spent mostly in front of the flat screen of mobile phone to do various activities. Moreover, reading news could be done at the same time as other activities, such as watching television. As a result, readers like more to see news from mobile phone. Mcquaid calls this trend as *the third screen*, where various activities such as watching movies, watching television and reading news are much more eagerly undertaken on mobile devices such as mobile phone [49]. Even, in this time, online news website provides Really Simple Syndication (RSS) service that enables syndication of website content in the various devices so the readers can still receive the latest content without having to visit the site [50].

### III. RESEARCH METHOD

An approach that is used to measure credibility, quality, liking, and representativeness of content of online news website is generally quantitative approach, with the survey method [12], [18], [22], [51], contents analysis [25] or experiment [15]. Since this study is new and has not been studied yet in Indonesia context, the study applied an experiment method to measure readers' different perceptions of the news site content.

*Participants and Procedures.* The participants in this experiment were voluntary, where the candidates of participants who met the requirements had to register themselves to be involved in the experiment. Invitations to be the participants had been spread through announcement

boards in campus, Faculty of Social and Political Science, University of Indonesia and various mailing lists of the students. There were two requirements of being the participant. First, the potential participant was possessing a device to access the site, such as *personal computer* (PC), laptop, tablet PC, tablet/pad or smartphone. Second, potential participants had ever accessed online news websites at least for a week latest. Experiment group consisted of 120 participants to get an ideal number for an experiment. Unfortunately, not all participants answered the questionnaire some of them left blank the question. The response rate of filling items on the questionnaire is more than 70%.

In the experiments group, the participants were divided into three batches which each batch consisted of forty people. Each batch followed three phases of experiment. In the first phase, the participants were asked to enter a room that had been provided various devices to access the online news website. The devices consisted of five types, namely PC, laptop, tablet PC, tablet or pad, and smartphone, and each type were provided two units. The choice of accessing device toward the site was based on the survey result that had ever been conducted by Kontan. The survey results of Kontan Team last May 5-11, 2011 placed iPad in the first sequence (19.7% of male respondents, 29.2% of female respondents) and then it was followed by Galaxy Tab (9 percent of male respondents, 15.7% of female respondents), Playbook (10.4 % of respondents), Acer Iconia (4.4% of respondents), PC-Laptop-Netbook (16 percent). Then the highest was also in Smartphone Android (49.2%). Then the participants were welcomed to choose one of devices.

In the second phase, the participants were asked to access ten Indonesia online news website. Based on the top of ten Indonesia online news website, antaranews.com is the most accessed by participant, so this article focused on antaranews.com as an example.

In the third phase, after accessing ten online news website at one of the devices, participants were asked to fill questionnaire of bipolar emotional responses. It took ten minutes to fill the questionnaire for each site. Then, the participants moved to other device and access the same ten online news websites for the next four different devices. Therefore, each participant would fill five questionnaires for five types of devices and ten online news website. The experiment process took at least two hours for each participant. Then all submissions of questionnaires were checked and each participant was given a mount of money to reimburse their transportation and it was also as reward of participating on the experiment.

*Measurements and Research Instrument.* Emotional responses toward the content of online news website were measured from four variables: credibility, quality, liking and representativeness. Each variable was evaluated using nine-scale of bi-polar adjective. The bipolar adjective test had been also used on the measurement of user experience for interactive television (IPTV) [52] and media communication and online news website of BBC [45]. The use of bipolar emotional response testing (BERT) analysis in the site aims to bring emotional responses to the users in respect to the state and the reaction toward the unwanted site

that was already existed, still in initial design, or in final design.

Measurements of BERT used a differential semantic scale. This scale was commonly used to measure evaluation of emotional response by the couple of opposite adjectives to show the two extreme poles (bipolar) that were different [53], [54]. Operationalization of the four variables was performed by forming an indicator that was opposite one another. The credibility is measured by five indicators: 1) accurate (inaccurate vs. accurate), 2) authority (unwritten vs. written), 3) objectivity (subjective vs. objective), 4) update (out of date vs. up to date), and 5) scope (national vs. local). The quality is measured by five indicators: 1) clarity (unclear vs. clear), 2) coherent (unsuitable vs. suitable), 3) comprehensive (incomplete vs. complete), 4) concise (absent vs. present), and 5) writing (bad vs. good). The liking is measured by five indicators: 1) variety (not various vs. various), 2) lively (flat vs. vivid), 3) enjoyable (boring vs. enjoyable), 4) interesting (uninteresting vs. interesting), and 5) pleasing (unpleasant vs. pleasant). The representativeness is measured by four indicators: 1) disturbing (absent vs. present); 2) informative (educative vs. informative); 3) relevant (irrelevant vs. relevant); 4) timely (late vs. timely).

Those indicators were arranged sequentially in the questionnaire sheets. Each indicator has a range of differential semantic scale of 1-10 [55] that then was filled by the participants. That range was divided into five negative score (-5) and five positive scores (5). The number zero was deliberately removed in these instruments to avoid an answer with any doubts. The presentation of bipolar testing referred to bipolar graph used by BBCi to measure the emotional responses of the readers [45]. The graph showed the patterns and the shape of the *response emotional testing* result. The scores of the participants were grouped based on the site accessed and the devices used. The bipolar graph also explained the polarization among those indicators which were measured. Based on the measurements of differential semantics, the polarization had a range of 1-9 [55]. The range is divided into three categories: 1) low range polarization (1-3), 2) middle range polarization (4-6), and high range polarization (7-9). The low range polarization indicated that there was a similarity of emotional responses. Middle range polarization showed various emotional responses but they are not extreme one another. While the high range polarization was on the two extreme points that indicated a strong reaction that was inconsistent between people to the site. Feeling and assessment that emerged were various and very different from one another.

Besides the measurement of polarization range, the scale of emotional level response was measured as well [22]. It was an accumulation of the score for each indicator. The accumulation score of each dimension are then categorized into low, medium and high level. The scale of low level response showed a negative emotional response to the content dimension. On the other hand, the scale of high response showed a positive emotional response to the content dimension. While scale of middle level response indicated the emotional response was on the moderate side, which is neither negative nor positive.

*The Validity and Reliability.* The validity was performed

in two ways. The first was the content validity that viewed the result of items scale from three variables that observed during the bipolar test using the KMO test and Bartlett Test of Sphericity. The second was the concept validity that referred back to the concept and the theory used in literature. While the reliability was counted by Alpha's Cronbach on the items scale that were produced by bipolar test. The next step was analysis of the exploratory factors (EFA) to see the division based on the dimensions of content variables. EFA was also used to reduce some indicators that were invalid [18], [56].

#### IV. RESULT AND DISCUSSION

The statistical measurement of internal consistency and the samples sufficiency show that the four dimensions are valid. According to the factor analysis, a new dimension is formed ("update & timely" dimension) and there is a ("credibility") dimension that join with another ("quality") dimension. Therefore, the new four dimensions consist of credibility & quality, liking, representativeness, and update & timely dimension. Thus, all the variables observed are considered to be valid because the KMO value is more than 0.5 [56]. Since the Bartlett Test shows the statistical significance level of  $p < 0.0005$  and the coefficient of degree of freedom (df) is not zero, the variables observed is considered to be satisfactory and can be processed in the next statistics procedure. The result of reliability shows some different reliability point limits. For example the liking dimension has the highest value with excellent reliability while the credibility & quality dimension and the update & timely dimension have a high reliability. In addition, the representativeness has moderate reliability. Thus, every dimension in the measurement of the content of the online news website has a good internal consistency although in the various level.

From those 16 indicators of antaranews.com content on PC Desktop, there are 10 indicators (62.5%) which have the low range of polarization. From the graph, it can be seen two dimensions (representativeness and update & timely) which have a low polarization. Those show emotional response similarity and emotional consistency to representativeness, update, and timely of antaranews.com news content. The range of polarization tends to direct to the right side. It means that the news content of antaranews.com seems to be accurate, have a written authority, to be objective, clear, suitable, good writing, various, relevant, and up to date.

On the other hand, the indicators which have the high range of polarization are the comprehensive and the interesting. It means that an emotional inconsistency happens from the comprehensive and the interesting sides of antaranews.com news accessed through desktop PC. From the 16 indicators of antaranews.com content on laptop, there are seven indicators (43.75%). It means that they have the low range of polarization. The range of polarization tends to direct to the right side. It shows that the content of antaranews.com news on laptop seems to be accurate, clear, suitable, vivid, enjoyable, interesting, and up to date.

In addition, in the high range of polarization, there is found four indicators (25%) namely, the authority, writing, informative and relevant. Those indicators show the various and inconsistent emotional response on the aspect. Based on bipolar graph, the content of antaranews.com in tablet PCs

can be seen that there are only two indicators (12.5%) which have the low range polarization. They are the accurate and the clarity. In addition, there are 10 indicators (62.5%) that have the high polarization. The more indicators that have the high polarization indicate that the news content of antaranews.com accessed through tablet PCs is considered inconsistent and extremely various.

Antaranews.com news content accessed through tablet/pad shows that there are 14 indicators (87.5%) that have the low range polarization. In addition, there are only two indicators (12.5%) that have the middle polarization. It means that the emotional response to the antaranews.com news content is similar and consistent. From 16 indicators of the news content accessed through smartphone, there are only three indicators (18.75%) which have the low range polarization. They are the relevant, the update and the accurate. The update & timely dimension shows a similarity of emotional response and emotional consistency to the update and the accurate of antaranews.com news content. In addition, there are only two indicators (12.5%) which have the high range polarization. The rest (68.75%) shows the middle range polarization. It means that the dominant response on smartphone is various but not extreme, and it does not show either consistency or inconsistency.

After considering the polarization of antaranews.com on the five accessing devices, the next step is measuring emotional response of the content of the online news website by considering the scale of emotional response level. The scale is arranged by accumulating the indicator score of each dimension. The result of score accumulation is divided into three categories: 1) low, 2) middle, and 3) high. The division of this category is based on the range of the minimum and maximum score in every dimension. The credibility & quality dimension has a value range 70 with minimum score (-35) and maximum score (35). It means the score of (-35) to (-11.7) is categorized as low, the score of (-11.6) to 11.5 is categorized as middle, and the score of 11.6 - 35 is classified as high. The liking dimension has a value range 50 with minimum score (-25) and maximum score (25). In this dimension, the score of (-25) to (-7) is categorized as low, the score of (-6) to 8 is categorized as middle, and the score of 9 to 25 is classified as high. In addition, the representativeness and *update & timely* dimensions have the same range, that is 20 with minimum score (-10) and maximum score 10. In the both dimensions, the score of (-10) to (-4) is categorized as low, the score (-3) to 3 is categorized as middle and the score more than 3 is categorized as high.

*Discussion Hits.* The experiment study shows that there are different results in the division of dimensions from the previous similar research [15], [17], [21], [42]. This study also successfully tests the concept of emotional responses. This is shown by the formed classification of the new dimensions that have already been tested their validity and reliability statistically. In the Sundar's research [15], the credibility dimension was differentiated from the quality dimension. However, in this research, the both dimensions join to one dimension, namely the credibility & quality. It shows that the content credibility also indicates the content quality. The credibility occupies the first order to determine the quality of online news content [12]. It agrees with Fidler's [26] opinion which states that the credibility of the

online news affects the quality of the journalism of the news site. Online news websites that reports junk news or lie will not be noticed by readers and it is considered as news that does not have quality [57]. Readers' perception of news credibility also shows the readers' perception of the quality of the website [51].

However, in this research, there is one of the indicators of the credibility and the update, which forms a different dimension. The statistical test indicates that the indicator of the update combines with the indicator of the accurate and forms a new dimension. Previously the indicator of the accurate was one of the indicators of the representativeness dimension. The new dimension that has been formed in this research is called the update & timely. It explains the update & timely of the online news content. The update of the online news content appears because of the pressure of an online editor to adopt a form of a more flexible and professional gatekeeping [25]. The update of the content includes those that are crucial in the business of online news. An evidence of the importance of the update can be seen from the previous research results that there are 12 out of 38 websites that provide services of RSS, podcasting, and sending news to private mobile phone [58].

This research also successfully describes the polarization form of the emotional responses in the form of the bipolar graph. The display of the emotional responses shows that the polarizations range of one to nine from every indicator so that the emotional tendency, similarity, and consistency of content display can be analyzed through this graph. The site of the antaranews.com online news that becomes the treatment shows the different polarization among the accessing devices. There are three forms of the polarization of the online news content: 1) low polarization, 2) middle polarization, and 3) high polarization. The low polarization is found on the PC desktop, laptop and tablet or pad. On the PC Desktop and laptop, the polarization tends to direct to the right side. It means that there are similarity and consistency in the emotional responses that tend to be accurate, have a written authority, to be objective, clear, suitable, complete, to have a good writing, to be various, vivid, enjoyable, interesting, pleasant, educative, relevant, up to date and timely. Based on the range and the direction of the polarization, it seems that only PC desktop and laptop that have the similarity and consistency of the emotional responses to the right side. It means that the news content of antaranews.com is specialized to be accessed through PC desktop and laptop.

In tablet or pad, the low polarization is in the middle of the extreme points and it indicates that the emotional response does not question the content so much because the characteristic of tablet that is designed as a mobile device makes the readers of online news websites concern the content at a glance without regarding for the aspects that affect the credibility and quality, liking, representativeness, and update and timely of the content.

The middle polarization occurs on the smartphone with the polarization direction tending to direct to the right side. It means that there are various emotional responses but not in the extreme value in the online news content that is accessed through the smartphone because the format of the online

news that still uses a website model and has not been mature yet to be accessed through various kinds of smartphone. As the result, the readers of online news have various responses but not too extreme. The high polarization is found in the tablet PCs and it shows that the various emotional responses are on the both extreme points and inconsistent. It means that the participants are confused to respond to the content display emotionally. The different polarization supports the Tossell's statement that the way of the users to access various websites depends on the technology and platform used [23].

In the arranging the scale of the emotional response level in the content variable, the four dimensions (credibility and quality, liking, representativeness and update and timely), show a high scale (>50%). It means that they indicate the importance of involvement, memorizing ability and user's satisfaction when accessing the online news website [22].

## V. CONCLUSION

The experiment research in the content of the online news website shows the importance of the emotional response test in bipolar. There are nine findings in this research. They are 1) the reconstruction of the new dimension of the online news website content, 2) the description of the bipolar graph of the emotional responses on various devices for accessing; 3) the arranging of the scale of the emotional response level.

This research shows the credibility and quality dimensions which combine and form a dimension and the formation of a new dimension, called update and timely. Therefore, further research needs to validate the new dimension through experiment and survey. This research also shows the way to access the online news through various accessing devices and the polarization of different emotional responses. Thus, further research needs to examine the relationship between display format of the online news website on each of these devices with the emotional response, including usability and personal site display.

This research is limited to one online news site as an experimental treatment tool. Content variable test of the online news content will be more relevant if it is performed by including more news sites. Then it does not only consider the scale and pattern of the emotional response level described in bipolar graph but also the axis map of the position of each site emotionally and index site based on emotional responses.

## REFERENCES

- [1] Kompas.com. (April 28, 2009). [Online]. Available: [http://entertainment.kompas.com/read/2009/04/28/03221190/sirkulasi\\_surat.kabar.terus.turun](http://entertainment.kompas.com/read/2009/04/28/03221190/sirkulasi_surat.kabar.terus.turun)
- [2] Tempo.co. (2008). [Online]. Available: [www.tempo.co: http://www.tempo.co/about/](http://www.tempo.co/about/)
- [3] T. A. Shimp, *Advertising Promotion and Supplemental Aspek of Integrated Marketing Communication*, Carolina: Hartcut Inc, 2000.
- [4] T. Rachman. (October 21, 2011). SPS:Pembaca Koran Tinggal 15 Persen. [Online]. Available: [http://www.republika.co.id/berita/nasional/umum/11/10/21/1tf33z-sps\\_pembaca-koran-tinggal-15-persen](http://www.republika.co.id: http://www.republika.co.id/berita/nasional/umum/11/10/21/1tf33z-sps_pembaca-koran-tinggal-15-persen)
- [5] N. Newman and D. A. Levy, *Reuters Institute Digital News Report 2013 Tracking the Future of News*, Reuters Institute for the Study of Journalism, 2013.
- [6] S. R. Maier, "All the news fit to post? Comparing news content on the web to newspapers, television and radio," *Journalism and Mass Communication Quarterly*, pp. 548. 2010.



- [7] S. R. Maier and S. Tucker, "Online news readers get different news mix than print," *Newspaper Research Journal*, pp. 48-62, 2012.
- [8] C. Cheung, H. Kim, and J. Kim, "An anatomy of the credibility of online newspaper," *Online Information Review*, pp. 669-685, 2010.
- [9] M. D. Arant and J. Q. Anderson, "Newspaper online editors support traditional standards," *Newspaper Research Journal*, pp. 57-69, 2001.
- [10] W. P. Cassidy, "Web-only online sites more likely to post editorial policies than are daily paper sites," *Newspaper Research Journal*, pp. 53-58, 2005.
- [11] Y. Nazato, "Credibility of online newspapers," *AEJMC 2002 Miami Beach Convention*, Miami: Communication Technology & Policy Division AEJMC, pp. 1-25, 2002.
- [12] G. A. Gladney, I. Shapiro, and J. Castaldo, "Online editors rate web news quality criteria," *Newspaper Research Journal*, pp. 55-69., 2007.
- [13] G. Jarboe. (March 23, 2004). Ranking the Quality of Online News. [Online]. Available: <http://searchenginewatch.com/>; <http://searchenginewatch.com/article/2067860/Ranking-the-Quality-of-Online-News>
- [14] U. Geiser. (September 25, 2013). Online News Sites Singled Out for Bad Marks. [Online]. Available: <http://www.swissinfo.ch/>; [http://www.swissinfo.ch/eng/swiss\\_news/Online\\_news\\_sites\\_singled\\_out\\_for\\_bad\\_marks.html?cid=36980364](http://www.swissinfo.ch/eng/swiss_news/Online_news_sites_singled_out_for_bad_marks.html?cid=36980364)
- [15] S. S. Sundar, "Effect of source attribution on perception of online news stories," *Journalism and Mass Communication Quarterly*, pp. 55, 1998.
- [16] Business Wire, "Keynote systems releases first ever study examining online experience and technical quality of news web sites," pp. 1, November 13, 2007.
- [17] R. B. Zajonc, "Feeling and thinking: preferences need no inferences," *American Psychologist*, pp. 151-175, 1980.
- [18] A. Douglas, *The Role of Emotions in Online Travel: Towards the Development of a Website Emotional Design (W.E.D) Model for Romantic Travel Consumers*, Michigan: Proquest Dissertations and Theses, 2008.
- [19] M. Opgenhaffen, "Multimedia, interactive and hypertextual features in divergent online news platforms: an exploratory study of Flemish tonline news," *First Monday*, pp. 7, 2011.
- [20] J. G. Stovall, *Journalism: Who, What, When, Where, Why and How*, Boston: Ablongman, 2004.
- [21] Q. A. A. Radaideh, E. A. Shanab, S. Hamam, and H. A. Salem, "Usability evaluation of online news websites: a user perspectives approach," *International Journal of Human and Social Science*, pp. 114, 2011.
- [22] M. W. Lai, "The effects of website design on female's emotional arousal and e-satisfaction," *The Business Review*, pp. 243-249, 2009.
- [23] C. C. Tossell, *An Empirical Analysis of Internet Use on Smartphones: Characterizing Visit Patterns and User Differences*, Michigan: Proquest Dissertations and Theses, 2012.
- [24] K. Kawamoto, *Digital Journalism: Emerging Media and the Changing the Horizon of Journalism*, Lahman, MD: Rowman & Littlefield, pp. 1-29, 2003.
- [25] G. W. Scott, *Mapping Mediamorphosis: How Print Newspaper Circulation Influences Features of Audience Participation at Online News Sites*, Michigan: Proquest Dissertations and Theses, 2006.
- [26] R. Fidler, *Mediamorphosis: Understanding New Media*, California: Pine Forge Press, 1997.
- [27] W. Dimmick, *Media Competition and Coexistence: The Theory of Niche*, Mahwah, New Jersey: LEA Publishers, 2003.
- [28] M. B. Salwen, B. Garrison, and P. D. Driscoll, *Online News and Public*, New Jersey: Lawrence Erlbaum Associates, Publisher, 2005.
- [29] B. Garrison, "Online newspaper," in *Online News and the Public*, M. B. Salwen, B. Garrison, and P. D. Driscoll Eds., Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc., pp. 3-46, 2005.
- [30] C. Bailey. (March 31, 2010). Content is King by Bill Gates. [Online]. Available: <http://www.craigbailey.net/content-is-king-by-bill-gates/>
- [31] D. Chaffey and D. Mill, *Content is King*, Burlington, MA: Butterworth-Heinemann, 2005.
- [32] M. B. Salwen, B. Garrison, and P. D. Driscoll, *Online News and Public*, New Jersey: Lawrence Erlbaum Associates, Publisher, 2005.
- [33] J. P. Hasley and D. G. Gregg, "An Exploratory Study of Website Information Content," *Journal of Theoretical and Applied Electronic Commerce Research*, pp. 27-38, 2010.
- [34] D. McIntosh, *Newspapers Must Prepare for 'Mediamorphosis'*, Editor and Publisher, pp. 24, November 2, 1993.
- [35] J. B. Singer, "The metro wide web: changes in newspapers gatekeeping role online," *Journal and Mass Communication Quarterly*, pp. 65, 2001.
- [36] L. H. Hoffman, "Is internet content different after all? a content analyzing of mobilizing information in online and print newspapers," *Journal and Mass Communication Quarterly*, pp. 58, 2006.
- [37] M. Metzger, A. Flanagan, K. Eyal, D. Lemus, and R. McCann, "Credibility for the 21st century: integrating perspectives on source, message, and media credibility in the contemporary media environment," *Communication Yearbook*, pp. 293-335, 2003.
- [38] C. N. Wathen and J. Burkell, "Believe it or not: factors influencing credibility on the web," *Journal of the American Society for Information Science and Technology*, pp. 134, 2002.
- [39] B. J. McCracken, "Are new media credible?" *A Multidimensional Approach to Measuring News Consumers' Credibility and Bias Perceptions and the Frequency of News Consumption*, Michigan: ProQuest Dissertations and Theses, 2011.
- [40] G. Bentele, "Der Faktor Glaubwürdigkeit: Forschungsergebnisse und Fragen für die Sozialisationperspektive," *Publizistik*, pp. 406-426, 1988.
- [41] D. Infante, R. Donald, and F. Deanna, *Building Communication Theory 2nd ed.* Illinois: Waveland Press, 1993.
- [42] S. S. Sundar, "Exploring receivers' criteria for perception of print and online news," *Journalism and Mass Communication Quarterly*, pp. 373-386, 1999.
- [43] R. S. Lazarus, J. R. Averill, and E. Opton, "Towards cognitive theory of emotions," in *Feelings and Emotions*, M. Arnold Ed., New York: Academic Press, pp. 207-232, 1970.
- [44] J. Averill, "A constructivist view of emotion," in *Emotions: Theory, Research and Experience*, R. Plutchik and H. Kelleman, Eds., New York: Academic Press, pp. 305-339, 1980.
- [45] BBCi, *The Glass Wall: the Homepage Redesign 2002*, London: BBCi, 2002
- [46] Normans Media Ltd., Omou Ltd: Emotional response testing leads to successful web strategy; Omou Limited launches Bertomo, a non-intrusive site test to create websites that find their target customers, *M2 Presswire*, pp. 1, 2003, August 4.
- [47] N. Newman and D. A. Levy, *Reuters Institute Digital News Report 2013 Tracking the Future of News*, Reuters Institute for the Study of Journalism, 2013.
- [48] Thetimes.co.uk. (October 7, 2013). [Online]. Available: <http://www.thetimes.co.uk/tto/public/digital/article3889076.ece>
- [49] Sunday Business Post, "The third screen is in your pocket," *Sunday Business*, April 8, 2007.
- [50] Antaranews.com. (2009). [Online]. Available: [www.antaranews.com](http://www.antaranews.com/rss/); <http://www.antaranews.com/rss/>
- [51] M. S. Reed, *Exploring Online News Credibility through Aesthetics and User-Contributed Content*, Michigan: ProQuest Dissertations and Theses, 2011.
- [52] R. Bernhaupt and M. M. Pirker, "User interface guidelines for the control of interactive television systems via smart phone applications," in *Behaviour and Information Technology*, 2013.
- [53] T. A. Fish, "Semantic differential assessment of benign, threat, and challenge appraisals of life events," *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, pp. 1-14, 1986.
- [54] M. M. Bradley and P. J. Lang, "Measuring emotion: the self assessment," *Journal of Behavior Therapy and Experimental Psychiatry*, pp. 49, 1994.
- [55] J. G. Snider and C. E. Osgood, *Semantic Differential Technique: A Sourcebook*, Chicago: Aldine, 1969.
- [56] A. Field, *Discovering Statistics Using SPSS for Windows*, London – Thousand Oaks – New Delhi: Sage Publications, 2000.
- [57] HT Media Ltd. Branding Ohio: Tagline Is Powerful Sound Bite, *US Fed News Service, Including US State News*, October 30, 2010.
- [58] J.-R. Huang, *Market Performance Analysis of the Online News Industry*, Michigan: Proquest Dissertations and Theses, 2007.



**Irwansyah** was born in Halaban Langkat, Indonesia, on January 21, 1973. He received a doctoral degree on communication study at University of Indonesia, Jakarta, 2010 and master degree from School of Communication at University of Hawaii at Manoa, Honolulu, United States of America.

He is a senior lecturer at Communication Department, University of Indonesia, Jakarta. He was one of International Fellowship Program (IFP) Ford Foundation fellow from 2003-2005 and Sasakawa fellowship in 2009. His current research interests are focused on user experience and emotional response from communication perspective.