



*Measuring media sites:
Introduction to Levels and Systematic Design*

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Abstract ;	Article info
<p><i>This contribution aims to explore the various changes in the media environment under the acceleration of technical transformations and the renewal of media production forms in order to reach or try to limit some levels of measurement and reach some methodological designs. In our study, we relied on some theoretical efforts on the one hand and personal effort on the other hand. The results obtained from this study in any way remain an attempt to touch the various levels of measurement and some methodological designs as long as the new media environment in general and the media sites of newspapers in particular are still in active development and its final form has not been completed.</i></p>	<p>Received 26 April 2021</p> <p>Accepted 29 September 2021</p> <p>Keyword:</p> <ul style="list-style-type: none">✓ measurement✓ methodological design✓ media sites

Introduction

Measurement at the level of media sites is one of the topics that has special importance at the level of information and communication sciences. The development of the field of information and communication has been accompanied by developments at the level of dimensions that can be subject to study and a multiplicity of approaches that can be adopted. One of the basic characteristics that characterize the curricula and tools is their ability to develop and adapt to accommodate the development of the media field and the change of its environment and the roles of its limbs, and at the time when technology and the phenomenon of merging between media production of media work in a new environment, molds and levels embraced by the Internet, thus, the development of media research tools to accompany these Developments became necessary. This contribution tries to restrict the various levels of research that can be studied and measured by proposing some methodological designs.

2. Signs of transformation in the basic infrastructure of media and the necessity of developing measurement in the sciences of information and communication

The global communication and media scene today is witnessing a major turning point, which its main slogan is the new media, and the main actor in this transformation is the internet which imposed itself in the media due to its characteristics that made it as the means of means without competition. The nature of this transformation is radically different from that which occurred in the nineteenth century when the industrial revolution began in Europe, and while the industrial revolution was based on the massive material production and transportation, the

internet and new media revolution today is based on the explosion of media and informatics and the combined transmission of image and sound; as material consumption increased as a result of the industrial revolution, does the consumption of non-material products today. The crucial importance of the Internet is its superior ability to contain media and its new means, and as a result of its tremendous flexibility, the Internet has contained the various media fields of written press, radio and television, in order to fuse the forms of expression that remained For a long time separated from each other, this phenomenon of integration could not occur without producing radical changes to the concept of media and communication and its various systems. It should always be pointed out before any description of the nature of the changes taking place in the field of information and communication and the transformations that it is witnessing, that these transformations are in the process of being formed and their final image has not crystallized as a result of its connection with technology, a technique in which its old is eager to catch up with its new and its systems fall apart in its recency¹.

The changes that affected the media and communication process and its comprehensive and radical experiences and at all levels, but they are always related to the technical factor, as they are always related to media innovations alone, and after the media in its traditional concept has been structured in a vertical form in which the situation of the receiver (means audience) is marked with negativity versus the medium (the sender) Which has a monopoly on building the media message and its final output. The media in its new system is no longer one-way, but has become a two-way dialogue in which the importance of one is no less important than the other; therefore, interaction replaces

reception and participation in place of negativity².

On the level of building the media message, the recipient is able to build his message by himself through the process of selection and adjust the calendar of exposing to the nature of the contents³, taking advantage of the character of specialization that has become the dominant feature of the content that is fabricated instrumentally, also from the continuous renewal for communication vessels. As for the latest and most important development, it occurred as a result of the increasing applications of modern technologies of communication in the field of media, as the public now plays a role in the manufacture of media contents. The phenomenon of free blogging that expresses itself in multiple terms and different names (citizen journalism / Participation journalism / bloggings), all express the radical development that affected the communication process.

The previous variables made it a methodological necessity to develop the measurement process, due to the transmission of the media message from the mass media to the Internet, where its process of content analysis and building standards for it goes beyond the editorial content to include a set of elements, including delivery tools, availability, ease of reading content and its links as imposed by the requirements of electronic editing and its management, meaning the following elements:

- Multiple texts.
- Links that contribute into building hypertext.
- Multimedia or hypermedia.
- Navigation and sailing tools.

- Interaction tools.

- Methods for entering the site and registering users; and a whole of other elements that the scientific research of classification illustrates on internet of media websites.

3. Classification of scientific research in the study of media sites

The research and measurement levels of media sites on internet are classified into⁴ :

- 1- Media website analysis research.
- 2- Development and use research.
- 3- The recipients and beneficiaries analysis.
- 4- Communication relations description.
- 5- Sources analysis.
- 6- Effects.

4. Levels of measuring electronic newspapers on Internet and some proposed designs for building measures

4.1. Interactive measurement

Kawamoto says, "Interactivity is the process of involving a machine or an individual in the process of managing the search for information, and the process of sharing information"⁵. At the level of the studied sample, interactivity has a great importance at the level of studies related to electronic contents, as it is one of the most important renovations that the press known and has changed the equation of media work. To study interactivity, the elements that should be focused on are:

4.1.1- Discussion forums.

By focusing on a specific topic, a number of internet people from different regions conduct discussions, as discussion

groups represent an open platform across the hour and distances to engage in dialogue and discussion with those who share interest in a certain issue or topic, and the participant must be registered in the group and use special programs for reading news, by contributing, discussion groups are formed within the framework of Internet due to geographic location or interest in a specific topic in a common specialization field.

Electronic newspapers are considered a suitable space to host dialogue and discussion forums, as long as the topics and news stories they present are mainly controversial issues that bear more than one point of view and constitute a starting point for discussion. Electronic forums are one of the most important aspects and images of interaction at the level of electronic newspapers, as they allow the user to express his opinion and turn it into a sender and a recipient, realizing the concept of interactivity. Hosting discussion forums increases the users on the site.

4.1.2- Polls.

Polls are a live field of interaction with readers, especially when they are used in the case of cross-referrals. Electronic newspapers employ polls at two levels: the first is related to questions about some topics that the newspaper considers important according to its media agenda and editorial line, while the second level is related to questions about the newspaper's location and design

4.1.3- Direct dialogue on websites

With regard to direct dialogue and areas of live dialogues, its importance lies in the fact that it allows discussion of topics directly in real time with the participation of newspaper readers and journalists, and it

is the service which is available only in four newspapers.

4.1.4- Commenting and adding articles on Arab newspapers websites.

Commentary is considered one of the most important means of achieving interactivity that the spaces of criticism and comment embrace at the level of electronic newspapers, which is a dedicated space on the website of the electronic newspaper at the bottom of the article or informational material in order to provide the opportunity for the newspaper's audience to participate in the displayed content by adding a comment, criticism or expressing a User's point of view. This service aims to increase audience participation in the media contents industry. The importance of commenting lies in achieving a degree of democracy and dialogue between the newspaper and its readers.

4.1.5- Employing social networking sites as a form of interaction.

Social networking sites constitute one of the applications of the second generation of the Internet 2.0, and because of its networking feature, it is one of the important interactive tools, especially if we take into account the cross-referral feature, which makes the contents of electronic newspapers move in a great flow.

4.1.6- websites embrace the concept of citizen journalism for citizen journalism.

Citizen journalism is one of the media and communication phenomena produced by the web 2.0, and it refers to those media contents produced by the average individual using new applications for the media, and it reflects a radical transformation at the level of the media and communication environment as a historical situation for the media has been changed due to the dual of the sender - the recipient,

thus, the audience turns into a media message maker. Increasing in the importance of this type of contents and the intensity of its presence at the level of virtual space and its transformation into the only source of image and information in some occasions and events led various media to employ this type of contents as attempt by allocating links or sites to host this type of contents.

4.2. Home page design

What is meant by the Home page is the directory page or the Entry page to a certain website ⁶; the home page of the electronic newspaper means the space and the first page that the recipient is exposed to and appears to the user as the first thing when accessing to the newspaper's website and includes The heading, display of topics, fixed design and its variable, and a number of icons that refer to other pages within the site.

There are many methods of designing and directing the home page in electronic newspapers, and we can mention these:

4.2.1 The electronic portal method: it is a method that focuses on displaying a large group of hyperlinks and addresses of portals and press materials published in the internal pages, with no details were provided about what is available on the press materials, as these details are presented in the internal pages, and this method is characterized by its dependence on Headlines with few introductions and poverty of body parts, the use of lines with a short extension, the use of small lines sizes, which provides a greater width than headlines, and this method is similar to the output of search engines and website directories, and yet some criticize it as it distracts the readers of electronic newspapers with the large number of links and their branches⁷.

4.2.2 The electronic units method: it relies on summarizing news on the page, with links at the end of each summary for more information about the topic of the news, and this method highlights an outline or introduction of the news with the image expressing the event, and in this method there are side lists To enter to other sections of the newspaper or from the drop-down menus that list the newspaper's index. Many informative newspapers rely on this method to benefit its advantages since there are a large number of websites on internet; it also facilitates the browsing process by giving the user a brief overview about the news and topics before entering into their details as this method also relies on small pictures and calm colors ⁸.

4.2.3 The dominant electronic unit method: it displays information in an easy way with the aim of directing users towards information directly without much effort. This method focuses on a single electronic unit, such as focusing on a moving pictures or a large flash footage, such pages are usually slow to load ⁹.

4.2.4 Mixed method: it combines the units' style with the presence of headings accompanying a quick summary, and the portal method to display only the hyperlink group without comment, in addition to the presence of multiple media accompanying the news .

4.3. Accessibility and Availability Forms

On the Internet level, Accessibility means access to a specific site, browse its contents, and benefit from its services. The process of measuring the accessibility of studied newspapers sites takes place in several ways and at many levels:

4.3.1. Indexing on search engines.

Ease of access to the site and its accessibility is one of the important

evaluation elements, as the easier access to the site, the greater the benefit rates from it. Indexing and including the site in search engines and directories contribute to reaching it through searches in all its simple and advanced ways, which objective search engines and directories are one of its most important means. The availability detection of accessibility is determined by the search engines. Search engines search for the required contents according to specific criteria which are a certain word or phrase, then the search process is conducted at the Internet level to draw a list of references in the form of texts, images, videos or news that meet those standards. Usually the presented results are in the form of a list that includes hundreds of thousands of references, which are arranged in successive pages, and the user often stops at the first results or the first pages if there are links related to the topic of research. This fact obliges those in charge of the website affairs of Arab newspapers to make their sites reach the first pages of the search engines, and this can only be achieved by publicizing them on search engines. Studies have indicated that websites are accessed by the largest number of visitors through search engines.

4.3.2- Multiple accessibility forms

One of the most important characteristics of the press websites industry on internet is the possibility of making its contents available in more than one way at the level of form or the level of language. The availability of more than one linguistic version at the level of the electronic newspaper's website gives the user multiple choices and increases the site's value and popularity.

4.3.3- Browsing speed

The speed of browsing the newspaper and the short time to review its contents is

an important and determinant factor in assessing the level of availability provided by the newspaper's website.

4.5. Assistance tools for use in electronic newspaper sites

The process of exposure and use of the electronic newspaper contents is a direct reflection of the building processes and designing the site, and the rationality of distributing press contents according to the requirements of the journalistic style that is based on interest, focus, and brevity. In this case the audience of the electronic newspaper needs many tools as a help in the process of browsing the contents of the electronic newspaper, among these tools: icons and navigation tools, assistive software, search engines and hypertext links ¹⁰.

4.5.1. Use and navigation tools in the websites

The electronic press content is characterized by diversity, especially since the virtual field allows the expanding process in publishing due to its separation from the pressures of paper publishing on the one hand, and the possibility of updating press contents on the other hand; therefore, the short and pictorial news ticker, in addition to the site map and the list of contents are one of the most important tools for navigation and use at the level of electronic newspaper websites.

A- News ticker

The most common use of the short news ticker is on the homepage level at the top, directly under the frame that bears the newspaper's logo and it is moved from left to right by using only the written language symbols.

B - Pictorial news ticker

Pictorial news ticker is used by combining pictures of events with headlines accompanying images in the form of a moving ticker, and it may be static. From a technical point of view, the pictorial news ticker is a form of multimedia employment that employs the elements of image and writing with movement, unlike the short news ticker that employs only the element of movement. Regarding the perceptual and emotional side, pictorial news ticker is more attractive to readers as it adds prettiness to the site and flexibility on Exposure and browsing process, because it allows the display of the most important events shortly. The principle of using short or pictorial news ticker at the level of electronic newspapers is the same in terms of the goal, which is to provide the browser with a summary of the topics that the newspaper considers important according to its editorial line and its ideological position on the events.

4.5.2. Assisted software for navigation.

In order to increase effectiveness of the electronic newspapers' sites in achieving the media needs for the users, and with the multiplicity of forms of display and content together, electronic newspapers are not satisfied with providing their content on regular web pages, but rather work to enable the beneficiary to benefit from the contents in various forms for the purpose of downloading and retrieval. We can present the following elements to measure this level of electronic newspaper work:

A- Reading and downloading software

It means the software that enables the user to activate this benefit, such as: PDF- WORD- PPT- ADOBE.

B- Navigation icons

Navigation icons (go - back - top - bottom), in addition to their prettiness side are intended for facilitating the browsing process. These icons shorten time and reduce effort and come in the form of symbols such as: ^ meaning back to the top or it is written literally

C- Hypertext links.

We previously referred to the nature of the overlap and correlation between the two concepts of multimedia and hypermedia as a result of the intersection between the two fields of multimedia and hypertext; in this context, hyperlinks are considered the basis of hypertext. The hyperlink is an element in a document or electronic paper that leads to another section in the same document or to another document. One of the characteristics of electronic newspaper websites is the ability to move freely between parts of the site, in addition to the ability to access web pages and other sites related to the topic and domain of the main site through hyperlinks that made the user to rid of the traditional rigid exposure process, and they are divided into:

- Internal referrals and links: These are links that allow the browser to move to another page on internet simply by clicking, and this page should be within the same electronic newspaper website in which that link was found.
- External referrals and links: these are links that allow the browser to move to another page of another website, which may be to another newspaper, for example, the news agency that represents the source of known news.

4.6. Press editorial models in electronic journalism

The press editorial models were not isolated from the developments that the field of media and communication

witnessed and what the technology has offered as electronic journalism that is developing and flourishing day after day, so the latter searched for new editorial models to edit its news and the various types of journalism, and one of the most important electronic press editorial models is the inverted pyramid model, besides to other models related to editing in print journalism:

- **Story board model:** The style of the story board takes into account that the electronic news is distinguished from the printed one by using all the capabilities offered by the journalistic work environment on internet, especially the interactive multimedia; in this style sound, image and echo are entered in the news story. The news material according to this design which is used by electronic news websites is composed from two frames located on the main page of the site , the first frame contains the title of the main article and the most important point in the news material or its introduction if it exists and according to the desire of the electronic editor and in the corresponding frame elements of multimedia from audio clips, video clips, or graphic elements are placed (graphs, illustrations or tables ...) ¹¹.

- **model or style of sections:** This style fits complex and in-depth news and news stories, and is based on dividing the news into sections and dealing with each section as an independent news that has an introduction, body and conclusion, and the news is divided into parts according to the order of the events occurrence or according to the chronological development of the event ¹².

- **Screen-sized text blocks model:** It displays the material in the form of units or blocks, each one in the size of one screen, and there are links between these blocks that move the user linearly between the units (next) - (previous) and each unit has an extension of the previous, and paving the

way to the following, thus, it has no specific end, and there may also be external links that lead to other pages and sites on the web ¹³.

- **Long text style and model:** It displays the material in the form of successive screens, urging the user to browse through Browsing tools and bars, and using this model in the case of the content that must be displayed in writing form, and it is preferred to rewrite it with shortness and condensation, and it can be divided into smaller units that are interconnected in a non-linear manner. Some studies have indicated that users do not prefer browsing continuous long article, and also do not prefer vertical browsing of the article in general, accordingly it is preferable to place the article in one screen instead of pushing the user to download multiple pages, which drives him not to be exposed to the article ¹⁴.

- **Hourglass model:** It is a modified form of the inverted pyramid model. This model begins with an inverted pyramid to present the most important angles of the event and the most important information, then after several paragraphs it changes the presentation way and turns into a narration that narrates the events according to their chronological order and this model requires a clear paragraph when moving from the inverted pyramid to the narrative moderate pyramid, and it consists of a summary introduction, then background information about the event, then presenting the most important views of the event's parties , after that a consecutive chronological presentation of the sub-events in the news ¹⁵.

- **List Style:** This style is useful for news editing when the editor has several important points that must be emphasized, and it places the news information in the form of lists inside the news or at its conclusion, and it can be used in news related to studies, research results, government programs and economic reports ¹⁶.

4.7. Multimedia

Some differentiate between the term hypermedia and the term multimedia, as the

latter is not necessarily interactive although some of its products are designed to achieve some kind of participation on the part of the positive recipient while others are directed to the negative recipient. On the other hand, hypermedia always requires some kind of participation on the part of the recipient; it is considered a development of multimedia because it offers richer media and more alternatives. To clarify the concept of hypermedia, it is necessary to start from the point of hypertext that allows surfing over the internet through links that refer the user to pages, documents or other sites, while hypermedia also contains links that allow the user surfing, but not through words only, but through images, music, or video as well through links previously placed between these media. When the user click on the links, he moves to other media linked to them, so that the same content is presented by more than one medium. It includes the following elements:

A- Animation, video and audio: in the sense of how and how much websites use these elements.

B - Using the image on the main pages of the studied websites.

C - The extension of the home page: The height of the home page is measured by the height of the screen.

4.8 Services on electronic newspaper websites.

It is represented in the set of services provided by the websites of Arab newspapers, and includes the following elements:

1. Appendices: Journalistic content that does not fall under the basic pillars, presented as a service and concerned with various topics.

2. Related items: Institutions and media publications belong to institutions close to website in terms of the ownership or the opening line.

3. Archive Service: Ability to view previous issues and articles.

4. Print service: the ability to print the electronic press content.

5. Site statistics: statistics provided by the site about its contents, including:

- Most readable.

- Most commented.

- Most printed.

6. Other services: It includes a group of sub services, which are:

6.1. Site abstracts: updated information about a specific topic that is sent by the website to the user without having to visit the site ¹⁷.

6.2. Live Broadcast: Live televised broadcast on the website.

6.3. Translation: The presence of a translated version at the site level or the possibility of machine translation.

6.4. Renew and update: synchronization in publishing the news, the existence of the latest update of the content and keeping up the update with the nature of the website.

4.9. Search in website category: The Availability of search engines at the level of Arab websites:

a. Sites have internal search engines.

B. Sites have external search engines.

C. Sites have internal and external search engines.

D. Sites that do not have search engines¹⁸.

Conclusion

Research tools and methodological designs constitute one of the very important elements in the media field, and their importance increases to limit the various media phenomena and influences, especially with the expansion of contents production, the increase in media applications and the added value of content industries, the restructuring of the roles and the importance of communication process parties. Any attempt to limit measurement levels at the level of media sites remains just an attempt to approach a field that is still forming and its final outcome has not yet been finalized, in the light of the acceleration of technical disclosure and the continuous reproduction of media applications. The most important point that should be emphasized is that research in media sites is a fertile field for qualitative research and quantitative studies, in which socio-demographic factors and individual use models are overlapped in a way that imposes a pairing between quantitative and qualitative approaches.

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