

CHAPTER TWO

REVIEW OF LITERATURE

The Internet or the networked host computers was made available to the public in the United States in 1984 and in Thailand in 1991. Today, there are over 489,774,269 Internet hosts and a billion Internet users worldwide.

Computers coupled with the capabilities of the Internet where different types of computing systems are connected to allow rapid communications among them have become an important means of mass communication, media broadcasting and interactive communication.

Even though the Internet is the new media, the conventional theories have been used in developing the Internet and Web sites. This chapter reviews literature in three main areas, focusing on Internet users, along with a summary: 1) Media Exposure 2) Communication and Persuasion – Prominence Interpretation Theory 3) Cognitive Authority and summary.

2.1 THE THEORY OF MEDIA EXPOSURE

Use and gratification research studies show that media use and gratification vary by medium. Les Brown, a leading journalist and media critic observed that among the variety of media: television; radio; newspapers and news magazines, computers which facilitate information seeking is the most intellectual.

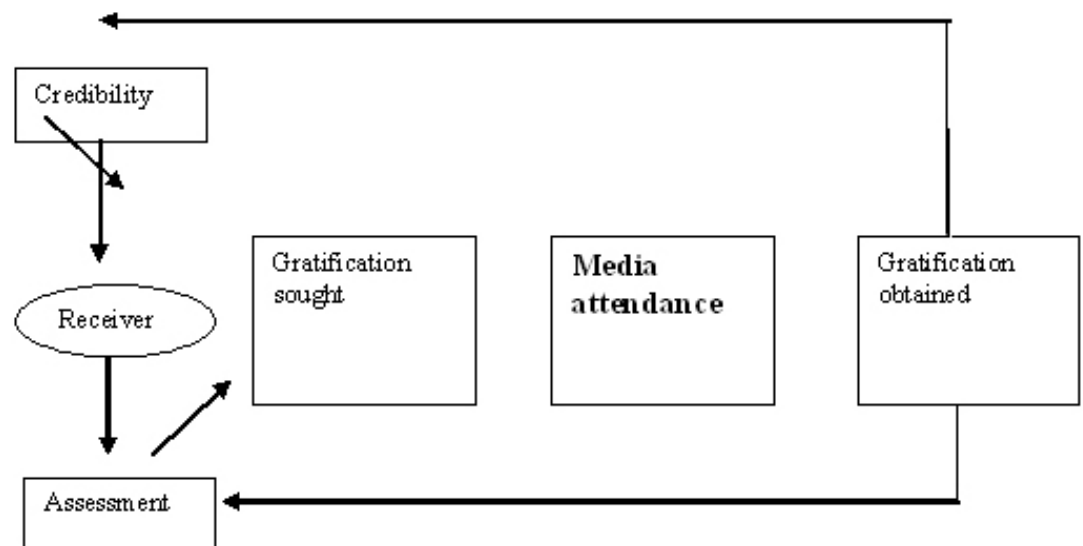
2.1.1 Media Exposure: Use and Gratification Theory

Blumer and Katz's use and gratification theory suggests that users play an active role in choosing and using the media. Users take an active part in the communication process and are goal oriented in their media use. The theorists say that a media user seeks a media source that best fulfills his needs. The use and gratification concept assumes that the user has alternate choices to satisfy his needs. Based on this concept, it can be concluded that the Internet audience is active and goal directed. The links between specific media choices and needs gratification are

established by audience members drawing their own conclusions. As a result, the media must compete with other sources of possible needs satisfaction.

Users as receivers seek information and select the medium. Assessment of information continuously takes place in the users' mind. If contents are found justified to their needs and purposes, gratification will occur. As a result, perception of credibility toward the medium arises.

Figure 2. Merging use, gratifications, and expectancy value theory.



2.1.2 Internet/Media Use

In 1973, Katz, Gurevitch and Hass, studied the society and psychology of the mass media. They saw that the mass media was a means by which individuals connect or disconnect themselves with others. They grouped the elements of needs that drive any individuals to expose themselves to the media, into five categories as follows: 1) Cognitive needs refers to acquiring information, knowledge to understand the world. 2) Affective needs are the feelings, emotion, pleasures related to sensory perceptions. 3) Personal integrative needs are credibility, stability, status needs. 4) Social integrative needs relate to family and friends. Motivated by the needs, users access information so they know what is going on in their society allowing them to associate with others.

Furthermore, Severin and Tankard (1997) added another category to users' need: tension release needs where users' need to relieve themselves from pressures of work or personal matters.

Apart from searching for information, text chat, e-mail, and writing blogs, users can watch movies, listen to radio programs, download videos and engage in activities that answer all the four categories of needs on the Internet.

2.1.3 Searching for and Selecting Information

On the Internet, users are simultaneously exposed to many kinds of information. To find information needed, they must first perform a search, and then choose from what is offered. Wirth (2002, p. 206) explains that users' searching behavior on the Internet is related to the users' perception abilities. Wirth call this 'unfocused attention.' He defines three steps of online reading behavior as follows:

First, they scan the page information, focusing on outstanding elements, like headlines, images, or animations. The amount of information scanned is high, but the depth of information is low.

Second is 'skimming' to find out if the information scanned is relevant to their queries. While at this stage, reading speed decreases and users pay more attention to textual elements and paragraph level.

Third, reading starts. Information is accessed systematically; the speed of reading is reduced and attention is focused (2002, p. 207). At this stage, the users perception changes.

The more appealing the information is, the more likely users start skimming, and reading. Likewise, their attention might become more focused when the amount of information becomes more in depth. Other aspects, like users cognitive involvement and interest in the message also affect their perceptions.

According to a study by Nielsen (2000), the ease of use of any web site is crucial for the users' selection process. Nielsen's study (1997) also reveals the more information is structured and visualized in accordance with the users' reading behavior, the more credible the message seems.

This concept (of expertise in presentation) shares some similarity with the prominence-interpretation theory.

A working paper by Hoffman, Novak and Chatterjee (1995) says that ‘The purpose of Search Agent sites is to identify other Web sites through keyword search of a database that extends throughout the Web. Software agents are used to generate and/or assist the search through the database.’

2.2 COMMUNICATION AND PERSUASION

The degree of credibility varies from person to person by situation and by each person’s frame of reference, formed by attitudes, values, beliefs and experiences. What one user finds credible another may not due to the different needs and goals when they go online, and how they process the information.

Carl Hovland and his colleagues (1953) discovered that three factors, the source of communication, the nature of the communication and the nature of the audience, influence each individual’s attitudes. Further more, two additional factors that also affect persuasiveness of messages are the channel or medium of message transmission and context or situational variables.

The Internet and its applications are always changing and evolving; and so are its users. BJ Fogg and colleagues (2001) who researched credibility of Web sites suggest that as web credibility researchers there are three significant moving targets to be considered: the Web user base, experience levels, and web technology itself. ‘As these variables change and evolve, research done in the past may no longer apply or may not be useful.’

2.2.1 Prominence-Interpretation Theory explains that, ‘Prominence’ and ‘Interpretation’ approaches are used when people assess the credibility of a Web site.

$$\mathbf{Prominence \times Interpretation = Credibility Impact}$$

When the theory is applied to Web site credibility assessment, prominence means the likelihood of being noticed, or being perceived. This concept is used by web site builders who want to grab the attention of the audiences. The expertiseness of any web site can be achieved through its relevant web design, interaction between

users and the site. It also includes language issues such as correct grammar and spelling, and proper style of writing.

Factors which affect prominence are 1) Involvement of an individual user (motivation to process and ability to process – related to Bandura’s self efficacy theory), 2) Content of the Web site (news, health, sports, etc.: informational vs. transactional), 3) Task of the user (seeking information, seeking entertainment, making a transaction and etc.), 4) Experience of each user (with the Internet, with subject matter, etc.), and 5) Individual differences (need for cognition, learning style, literacy level, etc.)

2.2.2 Credibility/Believability

Interpretation – is a person’s judgment about an element under examination.

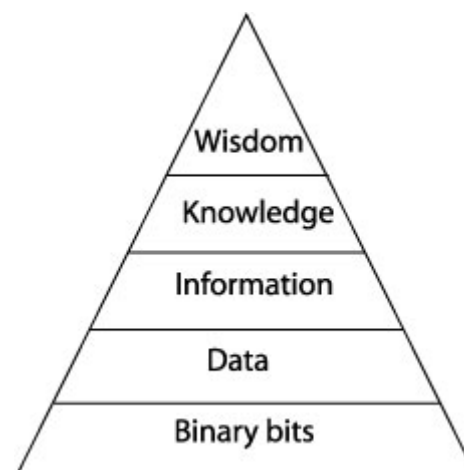
BJ Fogg’s lab work has identified four types of credibility that relates to Web sites.

1) Surface credibility – relates to Prominence- expertise in presentation. 2) Reputed credibility – relates to Interpretation based on cognitive authority. 3) Referred credibility – relates to Interpretation (a type of assumption) 4) Earned credibility – relates to credibility over time depending on experience of the Users.

2.3 THE CONCEPT OF INTERNET AND INFORMATON

2.3.1 Information and Knowledge Hierarchy

Figure 3. Knowledge Hierarchy.



Theorists, David Bollier and Charles M. Firestone view that knowledge in its most elemental form is data. A step up on the knowledge hierarchy is information, where data are organized and defined in some intangible fashion.

Ritchie (1991) explains that information consists of data and its interpretation. Information is that which informs or tells individuals something they want to know as they interpret data they have acquired.

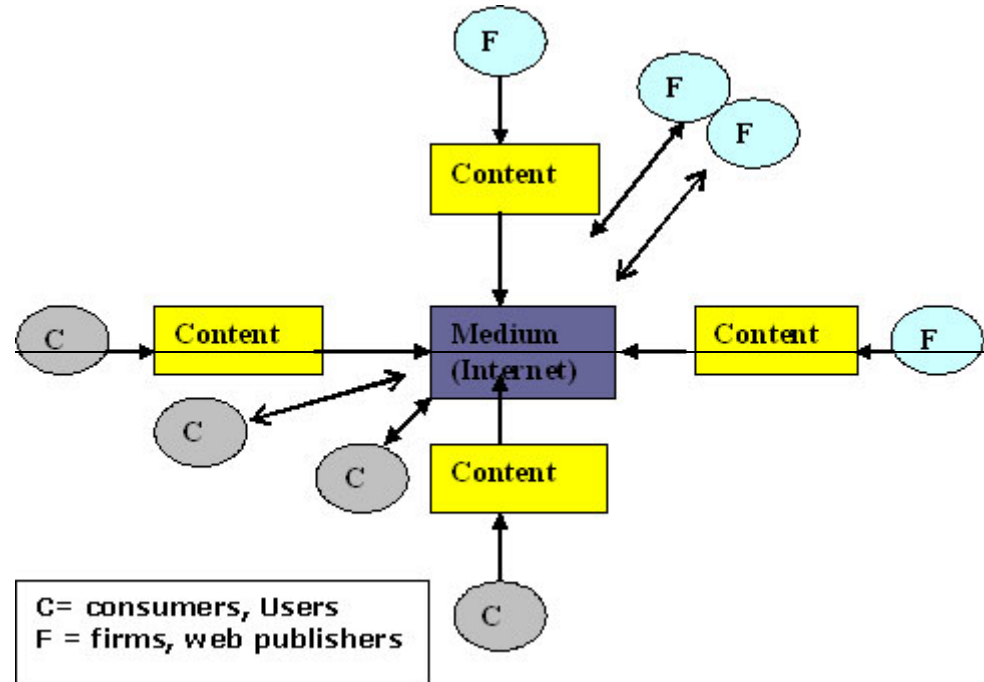
2.3.2 Communication Process on the Internet

Computer mediated communication is the core of the communication process on the Internet. December (1996) says that computer mediated communication (CMC) is the process by which people create, exchange and perceive information using networked telecommunication systems that facilitate encoding, transmitting, and decoding messages.

Among the newly emerged medium, the Internet has been considered to have its highest impact in creating new communication processes. In the early stage, the communication model presented Sender and Receiver as a separate unit. The sender sends messages/content through the medium to the receiver, resulting in one-way-communication.

Nowadays, the communication process on the Internet is more complex than the traditional way in that it allows two way communications between message senders and receivers. In online communications, participants take both sender and receiver roles. Because of this new concept, 'User' has been used to refer to the communicator in the new Telecommunication Technology such as the Internet and the World Wide Web, who act as a 'sender' and 'receiver'.

Figure 4. The model of marketing communication for the Web Internet: Reciprocal Communication (Hoffman D., Novak T. and Chatterjee P.)



The model shows how the content, message, materials and information created by organizations, consumers or users, are passed on/uploaded to the medium. This shows that creators of content can be web owners/publishers or their users. The concept of content upload and download through the Internet is attributed to the popularity of Internet usage.

2.3.3 Quality of Information

While the Internet's capability as an interactive media has contributed to a wider usage than the earlier media, such as print, television, or radio, it is more difficult to judge the relevance, quality and reliability of resources posted on Web sites. The World Wide Web provides an opportunity for anyone to be a writer/publisher. Persons, companies and organizations with access to an internet-linked computer can publish materials that may have factual errors and may be either unintentionally or purposely misleading. The following are some forms of negative traits of online information:

Misinformation is typically understood to mean 'wrong' information. Paul S. Piper, an expert Web designer and information specialist wrote that many degrees of

misinformation existing on the Web, from deliberate to accidental, serious to comic, can result in negative impacts such as financial ruin or personal injury, etc.

Disinformation – the Oxford Dictionary defines it as ‘the dissemination of deliberately false information, especially when supplied by a government or its agent to a foreign power or the media, with the intention of influencing the policies or opinions of those who receive it’. In this sense, disinformation is the subset of misinformation.

Bias ranges from personal, deceptive, egocentric, enhancement, to ideological biases. Information with bias intent of a writer presents the readers with one type of misinformation.

2.3.4 Cognitive Authority

Wilson (1983) states that people construct knowledge in two different ways: first hand experience and second hand experience. People do not count all hearsay as equally reliable; only those who are deemed to ‘know what they talking about’ become a cognitive authority to each individual. According to Wilson, cognitive authority relates to the kind of authority that influences thoughts that people would consciously recognize as believable.

Cognitive authority is one of the criteria Internet users apply when searching for information.

Internet Self-efficacy is an individual’s belief about their capability in using the Internet to accomplish useful tasks. (Eastin & LaRose, 2000). This belief should determine exposure to a medium that many users find troublesome (such as graphic, visualization and usability). Negative attitudes arising from this belief might reduce usage of the Internet for academic purposes.

2.3 RELEVANT RESEARCH

Search Strategies and Opinions Regarding Web Based Information of Prince Songkhla University Undergraduates conducted by Chumchit Saechun (ชุ่มจิตต์ แซ่ฉั่น, 2549) found that students had positive opinions on Web based information. There was

no statistically significant difference relating to the gender or faculty of study on such opinions.

Amonlaya Srichana (อมลยา สิริชนะ, 2542) researched knowledge, attitude, and use of Internet of the sample students. Students were found to have positive opinions in using the Internet for communication, education and broadening their knowledge. This research indicated that the students' attitudes had a co-relationship with their usage.

Douglas, Sanjay and Roger (1999) conducted research on attitudes toward the Internet among students of four-year state-support universities in the U.S. The analysis revealed that both juniors and seniors were happier with the Internet than freshmen and sophomores students were. Arts and Science majors were happier with the Internet than those majoring in Education and Business Administration.

Metzger, Flanagin, Zwarun (2003) found that college students gave higher credibility to Internet information than adult non-students. They verified the information they found online as significantly less.

Delia Neuman (2005), responded to Fitzgerald and Metzger's papers on 'Assessing the credibility of Internet information will always rest ultimately on the beliefs, perceptions, abilities, needs and other characteristics of individual information users'. (p. 4)

Tsai-Youn Hung studied the 'Undergraduate Students' Evaluation Criteria When Using Web Resources for Class Papers' in USA in 2004. The criteria used in his study, adopted from Gardner, Benham, & Newell (1999), were used to form the questionnaires of this study.

Factors of Credibility of Internet information.

Coverage relates to the scope of the topic. Supporting materials such as charts, statistics, or graphics, and links to other resources are credibility enhancement.

Currency relates to relevance of information. Users tend to be satisfied if the information is up to date and relevant to their needs.

Reliability involves with trustworthiness of the source. Domain name suffix of the websites designated types of URL (Universal Resource Locator) such as .com, .net, .or.th, org.th serve as one of evaluating criteria for Web users.

Authority relates to authors' credentials, which identify them as authority in the field. Users also rely on information given by institutions, organizations recognized by government or registered businesses.

Expertise of presentation results in users' perception of content Prominence and Interpretation have an impact on credibility.

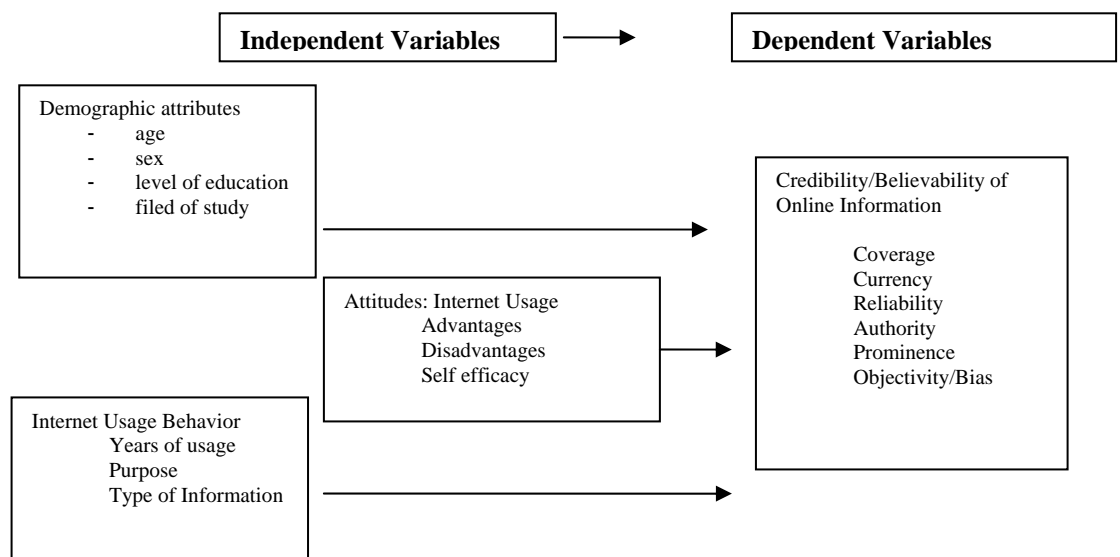
Bias or objectivity of the content attributes to credibility of information. Users have doubts when information is written with bias or when they cannot distinguish adverts from information.

Researchers found that sense of credibility derives from an instant assumption occurring in the mind of an individual. By rating the credibility of information using the same criteria, respondents express their opinion on credibility relating to those criteria.

This study uses Tsai-Youn Hung's five criteria of credibility to form the questionnaire. In addition, the 'Prominence Interpretation' factor was added to reflect the implication of 'Prominence-Interpretation Theory' of the online presentation.

2.4.1 Conceptual Model of Online Information Credibility

Figure 1. Relationship between Independent and Dependent Variables



2.4.1.1 Operational Definition of the Terms

Internet information/online information refers to the information that are articles, news, and blogs (messages) posted by owners and users of websites.

Students/Internet users are students who access Internet websites to gather information in quest of knowledge/answers to specific questions

Credibility refers to users' opinions toward the information they find on the Internet in terms of its trustworthiness and reliability. The respondents' opinions are situational/perceptual, depending on their interactions with each question.

2.4.1.2 Independent Variables

The independent variables of this study are demographic data of the subjects, including age; gender: male vs. female; level of Education: school vs. university; field of study/ science vs. non-science. Attitude also plays a role in forming an individual's frame of reference, an important element in communication of information.

2.4.1.3 Dependent Variables

Researchers pointed out that credibility is a form of individual's assumption toward an object. In this study, respondents were asked to rate the degree of credibility by criteria. The rating values were used to represent each student's assumed credibility on each criterion. The means of the total values were used for comparison of students crossing with each factor.

2.4 SUMMARY

Researchers found that a sense of credibility derives from an assumption occurred in the mind of an individual. The assumption results from evaluation of many criteria from the perspectives of users. Six categories, ranging from coverage, currency, reliability, authority, presentation, and objectivity of the source, were selected for use as the construct of credibility concept of this study.