

# **How Source Credibility Contextualises Self-Directed Learning: The Study of Selected Malaysian Women with Breast Cancer**

By

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## **Abstract**

Breast cancer is the most frequent cancer among Malaysian women. Learning and understanding the disease is important for the women in order to deal with this crisis situation. Findings from this qualitative study of ten women with breast cancer showed that the credibility of the source of their information was the key to their self-directed learning. Credibility was important with regard to: (a) verification of newly acquired information, (b) credibility of learning sources, and (c) concern about reliability of information. The findings underscore the role for women with breast cancer, doctors and policymakers to promote learning materials of credible sources.

**Keywords:** *Source credibility, self directed learning, breast cancer*

## **1. Introduction**

According to National Cancer Registry Report, in the year 2002 (Lim, Halimah & Lim 2003), a total of 26,089 cancers were diagnosed in Peninsular Malaysia, comprising 11,815 males and 14,274 females. Among all cancers in females, breast cancer is top of the list. In regards to breast cancer, the issue of education and learning has been regarded as important in dealing with the disease.

Much learning in adulthood is informal and self-directed (Casey & Hague, 2009, Chen et. al, 2006). The importance of self-directed learning for adults is well documented in the literature (Brockett & Hiemstra 1991, Brookfield 1985, Merriam, Caffarella, & Baumgartner 2007). Self-directed learning means taking personal responsibility in learning (Brockett & Hiemstra 1991, Merriam *et al.* 2007, Lennard 2010) which implies the learner's role in accepting the responsibility to undertake the process of learning, which includes planning, implementing and evaluating. Informal learning, as viewed by Lavenberg and Caspi (2010) represents non-institutional based learning with the absence of predefined structured curriculum and the process is controlled by the learner. In the context of breast cancer, learning is very much unstructured, drawing sources from printed and electronic media, doctors, nurses and fellow survivors (Rager, 2003).

One important aspect of self-directed learning is the sources of learning that learners draw upon. In the context of self-directed learning, the issue of source credibility is addressed by Candy (2004) and Davies (2008). In the local Malaysian context of self-directed learning in breast cancer, there were no recorded studies done to look into the issue of source credibility. This paper will report on the findings of a study that examined how source credibility contextualises self-directed learning among Malaysian women with breast cancer.

## **2. Literature Review**

Credibility is defined as believable and trustworthy (Oxford English Dictionary 1998). The other term that is closely related to credibility is reliability. Reliability is related to credibility in two ways: (a) as a

synonym for credibility (Wathen & Burkell 2002); and (b) as an important feature of credibility (Doyle & Hammond 2006, Lankes 2007, Smith 2008). Reliability also leads to credibility (Smith 2008). As used in this study, reliability is an important feature of credibility. In the context of breast cancer, it is important for the patient or the learner to ensure that source information is credible because the information provided will be followed in order to manage their survivorship.

Literature on credibility comes from four bodies of knowledge: health and medicine information (Adams & Berg 2004, Arora, Stoner & Arora 2006, Fisher, Burstein, Lynch & Lazarenko 2008, Smith, Bauman, McKenzie & Thomas 2005, Narhi 2006); information management and communication (Hovland & Weiss 1951-1952, Slater & Rouner 1996, Kato, Kurohashi & Inui 2001); web evaluation (Lankes 2007, Standler 2004, Doyle & Hammond 2006, Wathen & Burkell 2002); and advertising and communication (Buda & Zhang 2000, Eisend 2006, Arora 2007).

In the context of health information of various sources, findings of past studies assert the significance of source credibility (Arora *et al.* 2006, Smith *et al.* 2005). For medicine users, their three most credible sources of learning are print materials (patients' information leaflets), doctors and pharmacists, with the Web being the most uncertain source (Narhi 2006). In regard to website health information, effective health websites must be perceived as credible (Fisher *et al.* 2008, Doyle & Hammond 2006).

All authors in the literature reviewed generally concur that print materials are more credible than the Web (for example: Adams & Berg 2004, Doyle & Hammond 2006, Wathen & Burkell 2002). Wathen and Burkell (2002) list five factors that influence credibility of print material: source, receiver, message, medium and context. As the Web is gaining popularity as a source of learning, especially for those who seek health information, credibility criteria need to be established.

How does one evaluate the credibility of the sources on the Web? Fisher *et al.* (2008) proposed the perspective of perceived quality, trust, and usability. Doyle and Hammond (2006) envisage the use of the following criteria: identifying the source or determining authorship, authority, objectivity, language and style, internal evidence and corroboration. Wathen and Burkell (2002) offer a three-phase model of on-line information credibility evaluation: surface credibility, message credibility and content evaluation. In the first phase, a user first determines the credibility of the medium itself (surface credibility). He or she then evaluates the content of the message, and finally determines whether the information matches with his or her previous knowledge.

Lankes (2007) suggests the determination of credibility should be shifted from "authority of source" (trusted sources), to "reliability approach" where users seek commonalities and coherence among multiple information sources. This is an extension of Standler's (2004) proposition that credibility should be determined by the reader based on the information presented, and not by the expert who endorses the information.

The self-directed learning literature on the notion of credibility of information is mainly by Candy (2004) and Rager (2003). Candy (2004) for example, identifies credibility as one of the necessary conditions to be met if one is to be able to engage in online self-directed learning:

In the context of digital information, therefore, it is vital for people to have confidence in the consistency of the technology and in the reliability of the information encountered or generated if they are going to be willing to utilise the technology for a variety of purposes including learning. (p.109)

Rager's (2003) study on the self-directed learning of 13 U.S. women with breast cancer showed that one of the concerns was credibility of information, particularly from the Web. She reported that six of the women raised the concern about "the difficulty they had in distinguishing between good and bad resources including doctors, print materials, and Internet sites" (Rager 2003: 286). Malaysia has a higher incidence of delayed diagnosis, of late stage cancer, and higher mortality rate than the West. It is

particularly important that we attend to information sources available to women as the delayed diagnosis, according to Hisham and Yip (2004) was due to the negative socio-cultural perception of the disease. Therefore, this study was designed to gain the perspectives of Malaysian research participants regarding the question of source credibility.

## 2. Method

The results reported in this article are from a larger study to examine the nature of self-directed learning among Malaysian women with breast cancer. A qualitative methodology was deemed the most appropriate design to uncover the nature of self-directed learning among the Malaysian women. The purpose of sample selection was not to achieve statistical generalisation, but rather to gain the perspective of participants (Merriam 2009, Morse & Richards 2002). The selection of participants was therefore based on the potential of each participant to contribute to the researcher's understanding of the phenomenon under investigation. In this study, purposive sampling was used. According to Merriam (2009), the criteria used should reflect the research question and guide in identification of information-rich cases. The criteria for the selection of participants were: fulfilling Tough's (1971) criteria of spending at least seven hours of learning of a subject matter in a period of six months, being a female survivor of breast cancer, and being able to communicate in English or Bahasa Melayu.

Participants were identified through the assistance of a coordinator of a local support group in Putrajaya, about 22 kilometers south of Kuala Lumpur, the capital of Malaysia. Ten participants agreed to participate and interviews were held at their preferred place. Each interview lasted between one and two hours, and the data were recorded verbatim using a tape recorder. The validity of data analysis was assured through a member check and peer review; and researcher's bias and assumptions were declared in the study.

For the purpose of data analysis, the researcher kept interview transcripts in printed and electronic forms. The constant comparative method (Bogdan & Biklen 1992) was used to analyse the interview data. The interview transcripts were read over and over again in order to identify themes. The data were then coded and comparisons were made across the interview participants. Coding was repeatedly modified to capture as closely as possible the common experience of the participants. In writing up of the study, participants' statements are quoted in order to demonstrate the connection between the researcher's interpretation and participants' actual experience.

**Table 1: Participant Information Summary**

<b>Participants</b>	<b>Age</b>	<b>Occupation</b>	<b>Education level</b>	<b>Date of diagnosis</b>	<b>Marital status</b>
<b>Gina</b>	33	Civil servant	Bachelor	April 2003	Married
<b>Hanim</b>	37	Housewife	Master	Sept 2001	Married
<b>Juriah</b>	52	Civil servant	Diploma	May 2004	Divorced
<b>Karima</b>	57	Lecturer	PhD	Aug 1998	Divorced
<b>Masni</b>	56	Retired teacher	Bachelor	Dec 2002	Married
<b>Nora</b>	60	Consultant	Master	June 2004	Married
<b>Puteh</b>	50	Lecturer	PhD	Mar 2000	Married
<b>Rina Tan</b>	47	Editor	Bachelor	Sept 2005	Married
<b>Swee Lan</b>	45	Teacher	Bachelor	April 2006	Married
<b>Thanam</b>	51	Teacher	Bachelor	Aug 2001	Married

The age of the participants ranges from 33 to 60. In terms of occupation, there were two civil servants, two university lecturers, two teachers, a housewife, a retired teacher, a consultant and an editor. All participants are university graduates; their education level ranges from Diploma to PhD. While level of education was not a criterion for sample selection, perhaps because of other criteria, the sample has a high level of education. In terms of marital status, eight of the participants are married while the other two are divorced. The participant information summary is shown in Table 1.

### 3. Findings

Analysis of the data uncovered three themes related to source credibility: (a) verification of newly acquired information, (b) credibility of learning sources, and (c) concern about reliability of information. The three themes address how the function of source credibility is applied in the participants' self-directed learning. The summary for each theme is presented in Table 2.

**Table 2: How source credibility contextualizes SDL**

<b>Themes</b>	<b>How source credibility contextualizes SDL</b>
<b>Verification of newly acquired information</b>	This is driven by the learners' perception that the illness that they were experiencing can harm their health or even result in death.
<b>Credibility of learning sources</b>	Their perception of the credibility of sources was based on expert knowledge (doctors) and commonness in experience (fellow survivors).
<b>Concern about reliability of information</b>	Unreliable information affects them emotionally; to ensure that they acquire reliable information, they seek information from credible sources.

The Table 2 shows how source credibility contextualizes the overall self-directed learning effort of Malaysian women with breast cancer by highlighting the themes of verification of newly acquired information, credibility of learning sources, and reliability of information.

#### ***Verification of Newly Acquired Information***

Initially, the learners sought relevant information from various sources. Later the newly acquired information was verified by consulting information from sources that they perceive as credible. Why did they verify information that they received? According to Hanim, you have to make yourself certain about whatever information that you receive. She explained, '*When the information come to you, you have to screen it yourself because there is nobody to. Okay, I'm lucky because I have a good doctor (to turn to) and I also read.*'

Hanim's idea is to learn so that one is able to verify information that she comes across. In order to learn, she equipped herself with knowledge by consulting doctors and reading relevant materials. To verify information, Gina took the opportunity to ask her doctor questions whenever she was in treatment. She narrated, '*Normally I ask doctor because after the diagnosis, after the operation, we see the doctor very often and during those times we ask the doctor whether the information is correct or not.*'

Gina's initiative in consulting doctors in order to ascertain newly acquired information was also shared by Juriah who said that, '*For things that I do not know, I will consult the doctor to be certain.*' Juriah, for example, consulted the doctor in order to remove some doubt in her mind. If she gets information from anyone, whenever in doubt, she will ask the doctor. She said, '*I listen, but I don't listen to it one hundred percent. Some of the information is reliable but for things that I do not know, I will consult the doctor to be certain.*'

The participants felt the need to verify information because they wanted to make themselves certain. The newly acquired information is referred to the perceived credible source, that is the doctor, to “determine” the certainty of the information. The doctor is therefore the only way they verify information.

### ***Credible Learning Source***

All participants in this study perceived doctors as a credible learning source. The illustrative example is that of Juriah’s experience. She recounted,

*‘My brother asked me to try herb, that kind of things but I am not the type of person who, I didn’t think of taking other things into my body, I must make sure that the thing is okay, so I asked the doctor whether it is okay to try the herb.’*

Although a family member’s is highly valued, in the context of breast cancer survivorship, she regards the doctor’s opinion as more credible. The doctor advised her against trying the herb, so she did not do it. In fact she said that during her treatment, she did not take anything except what was prescribed by doctors.

The other source of learning is other survivors. Although they are not the primary source, the information that they offer is perceived as useful. For example, Swee Lan said;

*‘Some of the survivors were very good, they visited me many times. I was very thankful to them, every time they came ([to visit me], I always asked them about what I can eat and what I cannot eat [as a breast cancer patient].’*

The participants have their bases for the positive perception. For example, they asserted that doctors tell them the ‘truth,’ doctors are ever willing to entertain patient’s questions, and doctors ‘know all the tricks.’ Karima, in advising other survivors to follow their doctor’s advice said, *‘follow the doctor’s advice, don’t go to ‘bomoh’ because doctors will tell the truth whereas bomohs or traditional healers can only give hope.’* She added that, *‘bomoh will give you hope, they say they can cure whereas the doctor will tell you the truth.’* Another participant, Thanam also had a very positive perception towards doctors. She advised her friends that in order to be informed, just go to the right source, the doctors. Her expression, *‘they know all the tricks’* refers to the perceived expert knowledge that the doctors have in order to deal with breast cancer patients.

Their concern about credible learning sources is also reflected in their choice of books. For example, Rina Tan read a book titled ‘Living through Breast Cancer’ by Dr. Carolyn M. Kaelin because, *‘She wrote the book, she herself is a doctor as well as a breast cancer survivor. That was the reason I bought it, because it is her own experience, I think it is very useful.’*

From her statement above, it is clear that the book was chosen because of two important reasons that the author has: (a) expert knowledge and (b) commonness in experience. As a doctor, Dr. Kaelin is regarded as having the expert knowledge in breast cancer. The fact that she is a survivor serves to add more credibility as she had been through the survivorship experience, just like Rina Tan.

### ***Concern about Reliability of Information***

Participants interviewed were concerned about reliability of information. The notion of reliability carries the idea of consistency and believability of information. They reported that there was information from the Web and newspapers that was contradictory to what the doctor had advised.

Regarding the contradictory information, two of the participants were confused whether they could take soy bean, milk and red meat. According to Gina;

*'When we have too much information, for example on diet, we cannot eat this and that, people say that soy bean is good for survival, but there are those who say otherwise and they also say milk is also not good, so there are things that we can take and we cannot take but whether the information is right or wrong, we are not sure.'*

For her, the best thing to do is to always consult the doctor. If the doctor could not give his or her opinion, Gina said that she would have to make her own decision whether to believe or not to believe the information. A similar problem was quoted by Swee Lan. She recounted, *'Whenever you ask the doctor, you get everything you can eat. But when you read the newspaper, you can't have red meat, you can't have this and that.'* She claimed that newspaper articles that she read in the newspaper advised against taking red meat but her doctor's advice was *'everything you can eat.'* This contradictory information makes her confused.

Karima said that information can be downloaded from the Internet. However, there was too much information available and she felt uncertain whether the information was correct. She explained, *'You can download from the Internet, but sometimes Internet has too much information, you don't know which are correct.'* She explained that although she could get access to medical information, she needed the credible source to rely on. For her, the credible source was her oncologist. Participants such as Gina and Thanam expressed their concern about reliability of the information from the Web. Gina said:

*'There is the bad side of Internet. It gives too much information that makes us anxious. There are things on the Internet that cause us, the survivors felt very anxious about. That's why the information needs to be confirmed by doctors.'*

Whenever she came across information that she was not sure of, she consulted her doctor for confirmation.

In terms of believability, participants such as Nora and Thanam expressed caution over people offering advice. Nora, for instance, cautioned that people who want to advise others need to have adequate knowledge and the right attitude. She explained,

*'People who do not have enough knowledge to give advice and then these people who do not have knowledge and do not know enough and when they give advice, is emotional, in the mind they trying to help, and I always caution people that if you don't have enough [knowledge], never influence . . . '*

Her view above reflects her uneasiness with the credibility of information offered by certain people. She perceived that the information was not credible because the source do not have adequate knowledge in offering the information.

Nora's experience is also shared by Thanam. For Thanam, the questionable source of information refers to those selling health products. She said, *'People selling products, which you are not really sure whether it's good for you or not, and it's very costly, you know.'* She questioned the reliability of the information as the sales people motive was profit rather than the wellbeing of breast cancer patients. Regarding the use of the Internet as a source of information, she recounts her experience,

*'Internet can be quite depressing you know, initially, you know, initially I thought, the Net is the bookshop for information, then you read all the case studies and all these people who undergone and all that, you become more miserable, you know, because (laugh), you know, how to suffer and all that, so sometimes, when you need the positive how to live, go on with your life, you know, I prefer to actually not to read the Net because the Net has got [the information], it tell you a lot of no, what to do, so much, you know, material, and*

*then when you talk to your friend, they said, "No lah," you can, you know what I mean, these are people experiences, you know. So the point, after a while, I stop reading, you know, I stopped referring to the Net.'*

At first she thought the Internet was giving her hope but it did not happen that way. She perceived that the information on the Internet 'can be quite depressing,' not guiding readers in a 'positive thinking' way, but rather the information has many do's and don'ts.

#### **4. Discussion**

This study presents new understanding in regards to source credibility in self-directed learning of Malaysian women with breast cancer. Source credibility contextualizes the overall self-directed learning effort of Malaysian women with breast cancer by underlining the importance of verification of newly acquired information, credibility of learning sources, and reliability of information.

The current findings support earlier studies that highlight the use of credibility message in dissemination of health information (Arora 2007, Arora *et al.* 2006, Buda & Zhang 2000, Slater & Rouner 1996, Smith *et al.* 2005, Wathen & Burkell 2002). In terms of verifying health information, the current study reflects an earlier study by Fisher *et al.* (2008) that breast cancer patients are concerned about accurate information about their situation. As credibility in a message is needed, Hog, Laing and Winkelman (2003) recommend that net users seeking information need to educate themselves on how to verify information on the Web.

In coping with a life-threatening situation such as in breast cancer, the role of credible information is important. In terms of learning, the credible information can be accessed through those who have the medical knowledge to treat their disease, that is the doctors. The current findings are also in line with Narhi's (2006) findings that the doctor is the most trusted source whereas the Web is the least reliable one. The findings also reflect those of an earlier study by Leydon, Boulton, Moynihan, Jones, Mosman, Boudioni & McPherson (2000) who found that contradictory information is a source of concern among cancer patients. The findings also show that even highly educated women have problems with credibility.

The perceived credibility of physicians is an important factor in health information seeking (Fogarty 1996, Hall 2006, Leydon *et al.* 2000). In a recent survey of 2,074 respondents conducted by Business Ethic Institute of Malaysia (Rajah 2006), doctors were voted as the most trusted professionals. This is comparable to Cheng's (1999) study of Chinese women immigrants with cancer where he found that the respondents delegated selection of treatment to doctors because of their trust to the doctor. This study is also in line with HINTS' (2005) survey that indicates that health care providers are the most trusted health information source among Americans in which nearly 50% of the respondents surveyed reported that they would go to health care providers to seek health information.

In terms of self-directed learning, the findings confirm observations by Candy (2004), Metzger and Flanagin's (2008), and Rager (2003) that the issue of credibility is one of the concerns of self-directed learners. In this regards, the study reveals that even highly educated learners are confronted with the issue of source credibility.

#### **5. Conclusions**

Source credibility was identified as a dimension that contextualizes the self-directed learning of Malaysian women with breast cancer. This dimension is characterized by the themes of verification of newly acquired information, credibility of learning sources and concern about reliability of information. The issue of source credibility underscores the importance of learning and self-directed learning in the

fight against breast cancer. Since patients will continue seeking information on their own, the credibility of the material is crucial in their learning.

The findings underscore the role for women with breast cancer, doctors and policymakers to promote learning materials of credible sources. For the women with breast cancer, it is important for them to recommend their fellow survivors reading materials that come from credible sources. As the findings also show that materials written by doctors is preferable, doctors can play more active role in communicating with women with breast cancer through various support groups or by writing books on survivorship. It is recommended that policy makers provide more learning materials of credible sources at cancer resource centres in public health institutions.

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