Critical reading skills in health literacy

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This paper will introduce a brief rationale for teaching health literacy skills within the ESL classroom, then point out some similarities between health literacy skills and critical reading skills. Finally, it will introduce four activities where integrated critical reading and health literacy skills can be practiced.

要約：本稿は、ESL教室におけるヘルス・リテラシーのスキルを教えるための理論的根拠を簡潔に示したものである。ここでは、ヘルス・リテラシーのスキルと批判的読みのスキルとの類似点をいくつか指摘している。そのうえで、批判的読みとヘルス・リテラシーを結合させたスキルの実践を可能にする、4つの活動を提案している。

Over the last fours years at Ritsumeikan University in Kyoto, I have been teaching a content-based Health and Society course. The third year students are in the *Zengaku Fukusenko* Advanced English Seminar program, a four semester course, with one subject studied for 30 classes each semester over the two years that they are in the program. The other subjects that they study within the program are Law and Society, Intercultural Communication, and the Family and Society.

Quite early in the course, it became apparent that learners would benefit most from the introduction of a health literacy approach. Instead of teaching students about health as a topic, where facts must be memorized, much more could be gained by teaching it as a set of skills, which could be used by learners to apply to health challenges that they have, and will experience, within their own lives. This paper will focus on the way that critical reading is integrated within the health literacy skills that form the basis of the course.

Health literacy

In its earliest stages, Health literacy was largely a movement within the medical profession to develop better communication skills for interaction with patients who might have had limited listening and literacy

skills. The American Medical Association (*Health Literacy Overview*, 2004) defines health literacy as referring to "a patient's ability to understand common health care communications, such as prescription instructions, test results and insurance forms." Other definitions of health literacy have moved away from health professionals towards a much more health consumer-led approach. The United States National Institutes of Health (National Library of Medicine, 2000), define Health Literacy as: "The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."

The move toward health literacy, as opposed to general health education represents a paradigm shift in the way health issues are taught in any educational context. Health literacy reflects the change in the way that we receive health information, a change from the traditional doctor-patient top-down relationship, to one governed by access to large amounts of competing health information – through the mainstream media and particularly the internet, as well as wider access to medical journals and support groups. Health consumers need skills to access and manage their health information better.

For serious health problems, learners should always be encouraged to visit a health professional, and not solely to rely on the internet or other media for diagnosis or treatment. The principal use of health information from non-medical sources is to develop knowledge of preventative medicine and to increase patient knowledge of diseases and the potential range of treatments. These can then be discussed with a physician. Consider the areas where a patient may benefit from greater health literacy – they can understand basic health information about medication, they are empowered to ask the doctor questions about their illness, they know that there can be risks of side effects from medication and are likely to be more aware of them. In addition, they are less likely to press their doctor for unnecessary prescriptions like antibiotics for viral infections, they are less likely to self-medicate, and they are more likely to seek medical advice where needed.

There are many reasons to teach health literacy in the ESL classroom. Within the topic is a great overlapping of skills, language content, and a need for critical thinking. The content is both personal and global covering areas as diverse as food and water, environmental change, globalization and poverty, bioethics and human rights, knowledge of epidemics and drug resistance. Furthermore, as second language learners, students are likely to develop the skills needed to look after themselves better when traveling or living in another country. Finally, by teaching health literacy skills in English, we open up large areas of health information for learners and potential patients to access, through international media, medical websites, and support groups.

As learners are encouraged to take an actively critical approach to information, a significant amount of course time is spent developing critical reading skills. The following sections will show how critical reading skills can be integrated with health literacy skills.

Critical reading

Critical reading means that the reader is aware of the relationship between the writer, the text, and the reader. Goatly (2000) defines critical reading as "the act of communication in which the writer intends to affect the reader, and the reader attempts to work out the writer's intentions." Fayter (2002) suggests that in order to engage in discourse with a text that the following items may be important:

- Considering evidence or ideas presented by an author.
- Recognizing ideas that are reasonable and sensible, and those that lack credibility.
- Sorting information in terms of relevance, accuracy, and importance.

In critical reading, we are aware that all information does not have equal value, and that it requires interpretation by the reader. There are specific skills that allow us to interpret information effectively.

> In order to identify and evaluate an author's viewpoint, a student must be able to: identify and select relevant information, assess parts of a text for relevance, judge the validity of the information, re-organize and, in addition, synthesize information into the form of a coherent summary. These processes are complex because they also require the reader to hold relevant parts of a text temporarily in the memory, whilst other parts are sampled (Fayter, 2002, p.33).

Fayter also points out that some knowledge of how different skills function when reading texts is important, and that developing a purpose taxonomy of skills can help readers to work from literal meaning to greater understanding and more abstract inferences.

Skills for critical reading

The following skills specifically relate to those that can be taught in conjunction with health literacy programs. It is by no means an exhaustive list of all the skills taught in different critical reading programs.

Vocabulary

McNeil (undated) discusses three strategies for overcoming problems related to vocabulary in reading scientific texts. Firstly, it is necessary to have access to a comprehensive medical or scientific dictionary; secondly, to use the context to understand what is being said; and thirdly, to flag key concepts for the paper. McNeil suggests underlining unfamiliar words and phrases first, before focusing on the main meaning of the text. However, quite a lot of the more technical vocabulary may not be important in comprehension of the text, particularly in media texts. Native speakers, when reading health reports in the media, will unconsciously skip over unfamiliar words, such as the names of viruses, without there being any impact on overall comprehension. Media reports on health often use both common medical terms and technical ones – we may read a media report on the spread of syphilis with little difficulty and without needing to understand the writer when he/she states that the bacteria causing the disease is *Treponema pallidum*.

Using the reverse process, in which learners are not allowed to use dictionaries during the first (or even second) readings, encourages learners to focus on the meaning first, and to develop the ability to use the context to guess the meaning of words (Wen & Johnson, 1997). By recognizing structural clues, learners can read like native speakers do. They can skip over words where most non-medical native speakers see little purpose in remembering or struggling with the pronunciation.

Skimming

Skimming is often used as a conventional pre-reading strategy. It can help learners to build a logical framework by which they can then integrate the information that they read. Skimming activities can involve looking for topic sentences, key facts, subheadings, or main ideas. In critical reading, learners could be asked for additional tasks, such as searching for the reasons why the author is writing about the topic; a whole range of ways to write a particular text; or generating their own lists of questions to be answered by the text (Varaprasad, 1997).

Summarizing

By asking students to summarize articles, we check that the main purpose of the article has been understood. I use the précis form of summary, as laid out in the *Webster's New World Student Writing Handbook* (Sorenson, 1988). A précis reduces the length of the article by at least two-thirds, cuts out supporting details, and carefully presents the author's views without bias. By asking learners to reproduce the main points in their own language, after carefully reading and then not referring to the original while writing, learners demonstrate their mastery over the ideas contained in the article.

Filtering

This skill is closely related to summarizing and skimming. It involves the selection of relevant information and bypassing misleading or irrelevant information. This process is required in both the search for texts and within texts themselves.

Questioning

This can be used at all stages of the reading process, from pre-reading to post reading activities. Varaprasad (1997) suggests that learners write questions in the margins of the text as they read. Questions show a different way of interacting with the text – they point to information that is missing or unclear, they offer further directions for research, and they suggest ideas for further discussion.

Extrapolation and inference

When examining texts, it is necessary to look at the underlying assumptions – to look at what is implied rather than stated directly. According to Kurland (2000),

> inferences are essential to both written and spoken communication. Writers often only hint at what they mean, and mean much more than they actually seem to say. On the other hand, we can see the danger (and temptation) of assuming facts or

interpretations for which evidence is not present, and recognize that a critical reader reads with an open mind, open to many possible interpretations.

Use of inference skills can become even more important in the context of information published on the internet, where accessing a professional looking website can be simple, yet the reliability could be extremely questionable (Kim et al., 1999).

Skills for health literacy

Many of the skills listed as important for critical reading are also suggested by health literacy texts. Oster et al. (2000) emphasize filtering and summarizing as important skills. Filtering refers to an assessment of the reliability of information, and eliminating irrelevant or misleading facts: "Media might report particular studies without the context of other studies on the same condition or effect. Individual studies show only a small part of the total picture. The reader will want to filter out the sensational "story of the day" or look for follow-up information to clarify the details." (p. 46). Oster et al. (2000) also stress the importance of developing skills in summarizing information for others. This essential communication skill can be very important for those dealing with sick friends or relatives unable to research the information for themselves. The information about an illness may need to be simplified and kept age appropriate in the case of minors.

Skimming in health literacy can be used to find answers to critical questions relating to the accuracy of the information and potential for bias, before time is more fully invested in understanding an article. Questions such as the following can be asked:

- What is being claimed in the article?
- Who did the research?
- Who paid for the research?
- Who is the writer?
- What is the writer's purpose in writing the story?
- Is the magazine/website/newspaper a respected source for information of this type?
- Is it an advertisement? A news article? Or is it perhaps a combination of both, such as an advertorial?
- Is this just the next big thing (a "health fad" that will disappear after a short time)?

As learners become more acquainted with the vocabulary and materials used in the course, they also develop a greater knowledge of basic scientific concepts related to health.

Critical reading activities for the health literacy classroom

The following activities show how critical reading skills can be integrated with health literacy within the classroom. The four activities comprising this section are: students keeping a cuttings journal, a scribe activity, collaborative readings, and working with international documents. Each of the activities is useful in the development of one or more of the skills outlined in the preceding sections of this paper. In the

interest of brevity, the activities have been described only in outline, rather than provide full lesson plans.

1. Cuttings journal.

As a great deal of our information about health comes from the media, it is essential to build skills in understanding and analyzing this information. Learners in the health literacy program are required to submit 10 news articles related to health over the one-semester course. The cuttings journal system used in the class requires learners to interact with the materials, showing their level of comprehension, and to construct a critical response to the content of the articles.

The articles should:

- be from the media – the internet, newspapers or magazine, or other printed materials, such as advertising.
- not all be on the same topic or from the same sources
- reflect the interests of the learner.

The cuttings journal comprises four sections – vocabulary, summary, reflection, and questions for discussion. In the vocabulary section, learners are asked to list the vocabulary that they are unfamiliar with in English and their native language (Japanese, Chinese, or Korean). For the summary, learners are asked to write a précis, reducing the overall length of the article by at least a two-thirds, and eliminating unnecessary information such as examples, supporting details and long quotes. By paraphrasing the main points of an article, learners show that they are able to comprehend the main ideas of the article. There is a strong emphasis on accuracy and presenting the writer's views without bias or comment.

After the summary, learners write a reflection containing their own ideas about the article. Critical thinking is encouraged – for example, noticing that an article saying "Chocolate is good for you" quoted research sponsored by a well-known Japanese chocolate company. Learners are asked to be skeptical about the latest breakthroughs: one week there might be an article on research saying that tomatoes are good for you, the next week the opposite, that they are bad for you.

Finally, to help encourage a questioning attitude toward the article, learners are asked to write five questions about the article. As part of this, learners should consider ideas that they think were missing from the article, and things that they would like to discuss in class with other learners.

In the second class of the semester, the students do one article that I provide for practice in class, so that they will clearly understand what is expected of them. I allow about 15 minutes for each activity. I start with vocabulary, asking learners to read the article without the use of a dictionary, circling the words that they are unfamiliar with. I then do an activity where students use the context to guess the meanings of the words they don't know. In this way, learners practice the skills of filtering, skimming and vocabulary inference (by filtering out the information which is unnecessary for overall comprehension). Students then write a summary of the article, using the chapter on précis writing from *American College Students Writing Handbook* (Sorenson, 1988, p. 404-413) as a basis for the activity. After finishing the précis, we review it as a class, checking to see whether it contained the basic information from the article. The students then return to the vocabulary, now using dictionaries, to

build vocabulary lists, checking for accuracy rather than inferencing, and noting whether some of the words were necessary for comprehension. I follow a similar process of writing and checking for the reflection part – using comparison, background knowledge and checking for logical inconsistencies to examine the article critically.

Cuttings journals can be used in a variety of different ways in class. They can be used for pair activities – presenting the ideas from the articles in summarized form and the five questions can be used as a basis for discussion.

2. Scribe activity

The well-known 'scribe' activity, where texts or partial texts are placed on the walls around the room, can help with the development of vocabulary, filtering and summarizing skills. In traditional scribe activities, readings are placed out of the reach of dictionaries and note-books. Students must read and remember information or a story usually stuck to a wall, and reproduce it for a second person who is sitting at the table with paper and pen. It is often done as a race between competing teams or groups.

In the health class, I introduce the main symptoms and effects of some diseases, such as tuberculosis and syphilis, sticking common medical information about the disease to the walls of the room, cut into short sections of a few sentences or a paragraph. As in traditional scribe activities, learners are not allowed to take notes, but must remember as much as they can of the reading before returning to their group to answer the questions that they have been given on the method of transmission, prognosis, treatment, outcomes etc.

Learners are not allowed to take a dictionary with them to the wall, thus any words that need to be looked up are likely to be only those most crucial to the understanding of the passage. I encourage each group to divide the readings among the group members, then return to their table, make their notes in simple form, and in doing that, summarize and filter the information. They then share their information with their other group members . This activity can be used as a way to introduce factual information for later readings and discussion.

3. Collaborative readings

The aim of the collaborative readings is to introduce important concepts, information and vocabulary into student discussions. These take traditional reading activities, such as gap readings, to a new level. Learners use authentic documents and use summarizing, filtering, and presentation skills to construct a knowledge base for critical discussion on a variety of issues. Collaborative readings form the basis of most of the discussion activities within the health literacy program described here.

The idea behind collaborative readings is to give individuals different texts about the same topic. They are then placed in small groups where they have to share the information. The texts read by different students may:

a) contain only part of the information that they need to understand the topic, or

b) they can contain a variety of different viewpoints about a controversial topic.

An example of a) is the range of problems that patients can experience in clinical trials, different readings are given about clinical trials. Successful trials of new cancer medications can be contrasted with unsuccessful AIDS vaccine trials, and then this can be looked at with regard to the human rights implications of the notorious Tuskegee syphilis trials. Learners are given materials prior to the class and asked to read them. The 3-5 readings are divided equally between the class members – each student receiving one. Most of the readings are taken from newspapers, or the websites of broadcasters, such as CNN or the BBC. Some of the readings also come from international agencies such as the World Health Organization or NGO groups.

Before the class, I also prepare a set of questions related to the information in the readings. In addition to comprehension-style questions, I also create some questions which call for students to reflect and react to the issues being discussed. If the readings are difficult, or I have concerns about the readings not having been done sufficiently well, I place the learners in groups with other students who have the same reading first, and ask them to answer the 2-3 questions that relate to their own reading. This reinforces the main points of the article, and allows learners to begin to share the information that they have. It helps by providing a safety net for learners who may have experienced greater difficulty in understanding the content of the reading. In answering the questions, I ask learners to filter and summarize the information, so that when they come to present the information to others, they will be able to do it at a level that people without access to the readings will understand.

At the end of this first phase, learners are moved to groups with students who have different readings, and are asked to share the information. Learners work together to define the problems that the readings refer to by sharing the information and examples in the readings. Post-sharing activities include working together to create a summary of the problem, or brainstorming solutions. Generally, the role of the teacher is that of a facilitator, only intervening when the discussion has veered off topic, when learners are experiencing difficulties, or important points have been missed.

On issues where there are a variety of different competing views, there are fewer questions relating to comprehension of the material, and more on dealing with the social and ethical implications of the issue. Some emphasis is placed on identifying the major arguments for and against the issue being discussed before the learners venture into expressing their own opinions. To take the example of euthanasia, the readings I use reflect the views of patients, family members and healthcare workers who are all affected by the issue. The different forms of euthanasia are also introduced – passive, active, involuntary and physician-assisted suicide – through the readings.

4. Working with international documents

International documents form the basis of many countries' laws and reflect a commitment to the resolution of recognized international and social problems. In relation to health, such documents can include reports from international agencies, such as the World Health Organization, international treaties on health or related areas

such as human rights, such as the Nuremberg Principles of Medical Experimentation on Human Subjects (discussed below), or reports by NGO groups working in the field. When using such documents in the classroom, the challenge is to engage learners in a process of understanding often quite legalistic English. The language can seem inaccessible and repetitive. The challenge is to make readers interact with the material in a way that seems interesting. Two approaches can be used. Firstly, the problems which lead to the creation of the documents can be identified, and students can generate their own documents. These can then be compared to the original ones.

Another activity is to alter the original documents slightly, inserting "mistakes" which can then be identified and corrected by students. For example, when looking at the basis of laws related to clinical trials of drugs in humans, I use a slightly abridged version of the Nuremberg Principles of Medical Experimentation on Human Subjects. The principles were developed at the end of World War II in response to war crimes committed on prisoners in the name of medical science. In the activity that I use [Appendix 1], the 10 Nuremberg Principles have been slightly altered – some of the principles have been switched to a negative form (e.g. should®should not). Two extra principles have been added as well, one easily spotted, the other – that subjects should be paid for participation in the clinical trials – often generates strong debate. The documents can then be used to identify problems with clinical trials that have been studied in class.

Conclusion

The aim of this paper has been to show the relationship between health literacy skills and critical reading skills. Health literacy, as we have seen, aims to help learners deal critically with the large amount of health information that we are exposed to through the media and other sources. The course that I teach is intended to enhance the doctor-patient relationship by allowing the learner/patient to be more aware of alternative treatments, find support groups and clinical trials, to know their rights, and eliminate potential risks to their own health. Health literacy is an ideal topic for the advanced language classroom because it has both personal and global applications.

The activities – the cuttings journal, the scribe activity, collaborative readings, and ways to work with international documents - have been adapted from critical reading and ESL reading activities. The classroom activities show how skills can be used to engage the learner critically with health-related texts, thus furthering the goals of health literacy. The activities work well within an advanced ESL class, in that they offer practical and theoretical skills which can be used for travel internationally and for enhancing the quality of life at home.

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Appendix 1

The ethics of medical experimentation on human subjects

Adapted from the British Medical Journal No 7070 Volume 313, 7 December 1996

The judgment by the war crimes tribunal at Nuremberg laid down 10 standards to which physicians must conform when carrying out experiments on human subjects. This judgment established a new standard of ethical medical behavior for the post World War II human rights era. Amongst other requirements, this document enunciates the requirement of voluntary informed consent of the human subject.

Which of the following are T (true) and F (false)? Two of the standards should not be included at all (i.e there should only be 10). Can you tell which ones they are? Standards which you mark false should then be corrected so that the are true :

1. The voluntary consent of the human subject is absolutely essential. _____
2. The subject should not be told the nature, duration, and purpose of the experiment; the method; all inconveniences and dangers expected; and the effects upon his health or person which may possibly come from his participation in the experiment. _____
3. The subject should be paid for participating in the experiment. _____
4. The experiment should be for the good of society, and the results not obtainable by other methods or means of study. _____
5. The subject should be allowed to eat as much ice-cream as he or she wants. _____
6. The experiment should be designed and based on the results of animal experimentation and a knowledge the disease or other problem under study so that the expected results justify the performance of the experiment. _____
7. The experiment should be done in a way that causes physical and mental suffering and injury. _____
8. No experiment should be conducted where there is a reason to believe that death or disabling injury will occur; except, perhaps, in experiments where the experimental physicians also serve as subjects. _____
9. The medical problem to be solved is of greater importance that the safety of the subject._____
10. Proper preparations should be made and facilities provided to protect the subject against the possibility of injury, disability or death. _____
11. The experiment should be conducted only by scientifically qualified persons. _____
12. Once the experiment has started, only the researcher can stop the experiment if he believes that it is necessary. The subject must continue to participate in the experiment once the experiment has started._____