

# The Challenges of and Guidelines for Enhancing the Readability of Online Learning Content

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## ABSTRACT

*Without doubt, the Internet is one of the most powerful media for disseminating information as it is widely accessible, cheap, and quick. Nowadays, a lot of online courses are available on the Internet. The **hypertext** environment seems to be offering a number of advantages to writers of online materials. However, many online materials fail to disseminate a clear message because the writer fails to account for the differences between writing online and in print.*

*As Raskin (1987) has pointed out, "Hypertext seems like a wonderful universally applicable, powerful, natural, human-oriented model for organizing and accessing knowledge...But when asked how the ends are made to meet...the designers become inspecific and waffle."*

*Putting material online is not just turning a traditional file into a file format supported by the computer. We need to apply the basics and attend to the differences. It is the skills of the writer, not the capabilities of the machine, that decide the readability.*

*The first section of this paper seeks to investigate some of the challenges faced by people who develop online teaching and learning materials, brought about by things like **smaller screen display, reduced reading speed, different viewing habits online** etc. It leads to the second section, where guidelines and some dos-and-don'ts on improving readability are summarized from the literature and from my experience working on different online course development projects.*

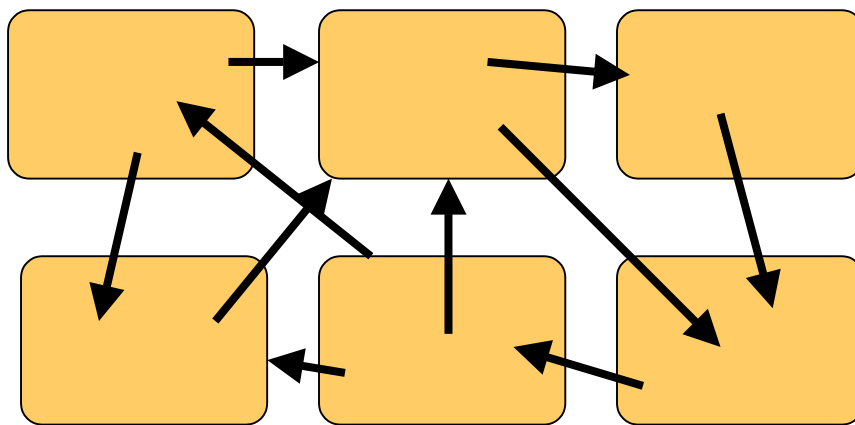
*The contents of this paper are based partly on literature review and partly on my experience working with UST faculty members or instructors on developing content for online courses. I have tried to conclude what some of the online documentation designers have said, for writing or re-creating online content. The arguments have been supported by evidence from personal experience.*

*As the term “online materials” can refer to a number of different formats of content, I will touch on **textual information** only, in order to be more focused, due to the limited scale of this paper.*

## 1. CHALLENGES FACED BY ONLINE TEXT WRITERS

### 1.1 Hypertext as Non-sequential Writing

Hypertext is widely recognized to be a powerful medium for disseminating information. One of the prominent features of hypertext is that it is a type of non-sequential reading, from the readers’ point of view. This contrasts with traditional text such as that in a book. There is no single order that determines the sequence of which piece of text is to be read.



**Figure 1: Non-sequential reading of Hypertext**

Figure 1 shows a pattern of reading Hypertext. Readers are given the flexibility and choices of reading the text. Unlike reading conventional text, they do not need to read from the beginning to the end.

However, also because of this flexibility, writers have to be more careful when designing the text, as they are no longer following the technique for writing conventional sequential text. Hypertext, while offering an entirely different approach to reading for the reader, also creates challenges for the writer.

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### 1.2 Potential Challenges in Writing Hypertext

Hypertext offers a degree of flexibility in reading pattern for the reader. At the same time, it has certain possible drawbacks. While the reader can decide what and how to

read, the problems might be overchoice or overload of information; the reader getting lost in hyperspace as there is no sequence to follow. I have identified some of the causes and implications of these drawbacks as follows.

### *1.2.1 Smaller Screen Display*

Online texts are displayed in a smaller area and are differently shaped from the paper page. Researches show that they only display the equivalent of one-third of a printed page at a time. Thirlway's (1991) reminder to online text writers is that in the online environment, more 'page-turning' is required, as most screens hold fewer (readable) characters than a page of a book. This is different from books because, in books, the reader can usually tell at a glance whether information is useful or not, whereas selecting and examining that same information on the smaller online display is more arduous (Ladow from Horton 1990). Writers, therefore, have to decide what to put on a 'page', without letting readers lose critical information. They have to find an effective way to chunk the information to make it more readable.

### *1.2.2 Different Reading Habits and Behaviors online*

In general, people seldom read online texts from the beginning to the end. They usually skim, scan, skip, flip, hop, and bounce just to look for what they want. In addition, they prefer short passages to long ones.

Because of these factors, writers need to better organize their text and make navigation more easy and effective. Pieces of information should be linked in a clear and systematic way. Navigation and mapping techniques have to be carefully applied so that readers do not get lost in hyperspace.

### *1.2.3 Dropping Reading Speed Online*

According to research, people's online reading speed decreases by about 39%. Thirlway (1991) has denied reading on screens as the best medium for reading. It is more tiring to read a screen than a page of a book.

Therefore, writers sometimes have to use more simple and direct language to raise readability and make reading easier.

## **1.3 Summary**

I have looked at the major feature of hypertext being a type of non-sequential reading and writing. I have also stated some of the possible challenges of designing and writing online materials. They are caused by: smaller computer screen display; decreasing reading speed online and tendency of people to skip, scan and get tired more easily when reading online.

In the next section, I will try to summarize the guidelines from professional online text writers and my own experience, with the aim of providing our course developers with some hints on how to write effective Hypertext for learning content.

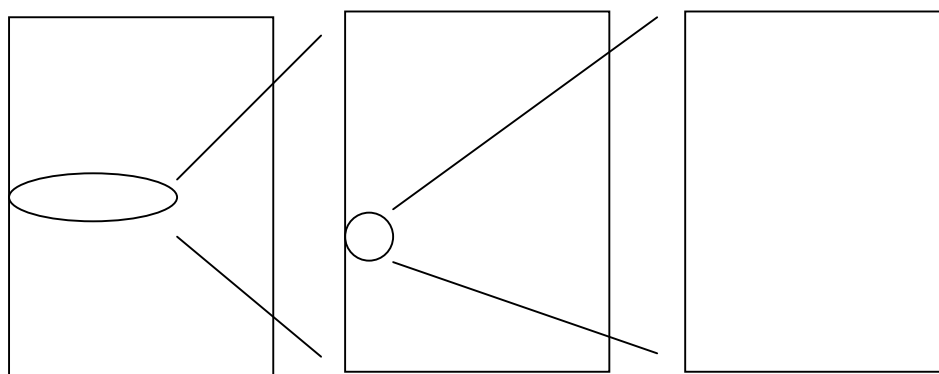
## 2. GUIDELINES FOR WRITING ONLINE COURSE MATERIALS

I will summarize the guidelines from several aspects: **length of text**, which includes using chunking techniques and linking information; **functions**, referring to the organization and navigation of texts; and **language**, which covers clarity, consistency and preciseness.

### 2.1 Length of Text

#### 2.1.1 *The Minimum of Text*

Research suggests that in the hypertext environment, many short documents are preferable to a smaller number of long documents as people usually skip and scan and prefer shorter passages. For this reason, writers are advised to put the minimum of text on a page, with the information covering one subject only. The following figure illustrates the minimum of text:



**Figure 2:**  
**Minimum**  
**of Text**

In Figure 2, the piece of text is displayed level-by-level. On the first page, only the list of sections is shown. The second page shows the contents of Section B, and the expanded point 3 is displayed on the third level/ page. In this way, readers can select what to read and focus on only one subject on each page.

#### 2.1.2 *Chunking*

Chunking is breaking long pieces of texts into smaller ‘self-contained’ paragraphs. Writers are advised to write discrete topics, not sprawling passages. To help readers read more easily, headings and subheads can be used to label each chunk. In most cases, bullets are also useful as learning content appearing in note or point form is usually more readable when compared to long paragraphs.

## 2.2 Functions

### 2.2.1 Organization

In the early stage of course development, writers need to know the structure of their course in order to plan for expansion. To do this, they can plan the entire organization in advance, list all topics and even create dummy topics, insert links as they write even though they do not yet have the destinations.

Hypertext systems can be hard and tricky to operate and follow. One of the misuses of Hypertext is that writers sometimes want to put a lot of information on the Web so they add a lot of links, which just makes it more overwhelming and difficult to read. We should, instead, keep it simple so that users do not have to learn too many ways of accessing the information

Experience has shown that readers expect the writer to blaze a trail for them. They like to be guided. Therefore writers can display the organization by adding a site map.

The following is a course built on WebCT<sup>1</sup> and it shows an example of a typical online table of contents displaying the organization. It can be found in <http://celt.ust.hk/ideas/olt/SApp/index.html>, by clicking on model 1 example in “The Four OLT Models”.



Figure 3: A homepage showing the organization of an online course

WebCT is an online delivery platform supported by HKUST. It is used for online course management, learning, and communication. Click <http://www.webct.com/> for more information.<sup>1</sup>

### 2.2.2 Navigation

In the hypertext environment, readers can easily get trapped in vast hierarchies and networks of information. To prevent this, providing a navigation guide is important.

Writers should give a clear starting point. One topic can be designated as the root or home topic. It should tell readers how the document is organized, and how to access the key topics. A table of contents can be presented to give readers the entire picture of the content.

Links should be added in moderation. However, the appropriate number of links always depends on the nature and the content of the course.

In some cases, we can provide a **study guide** or **navigation guide** to give information such as the essential requirements of the course, how to study the online course and where to get help etc.

The following is a study and navigation guide from a course in UST built on Lotus LearningSpace. This can be found in [http://www.ust.hk/celt/ideas/olt/solutions\\_applications/solutions\\_applications.htm](http://www.ust.hk/celt/ideas/olt/solutions_applications/solutions_applications.htm) by clicking on the model 3 example, the Four OLT Models)

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<sup>22</sup> Lotus LearningSpace is another online delivery platform supported by HKUST. The functions are similar to that of WebCT but the features are different. Click <http://www.lotus.com/home.nsf/welcome/learnspace> for more information.

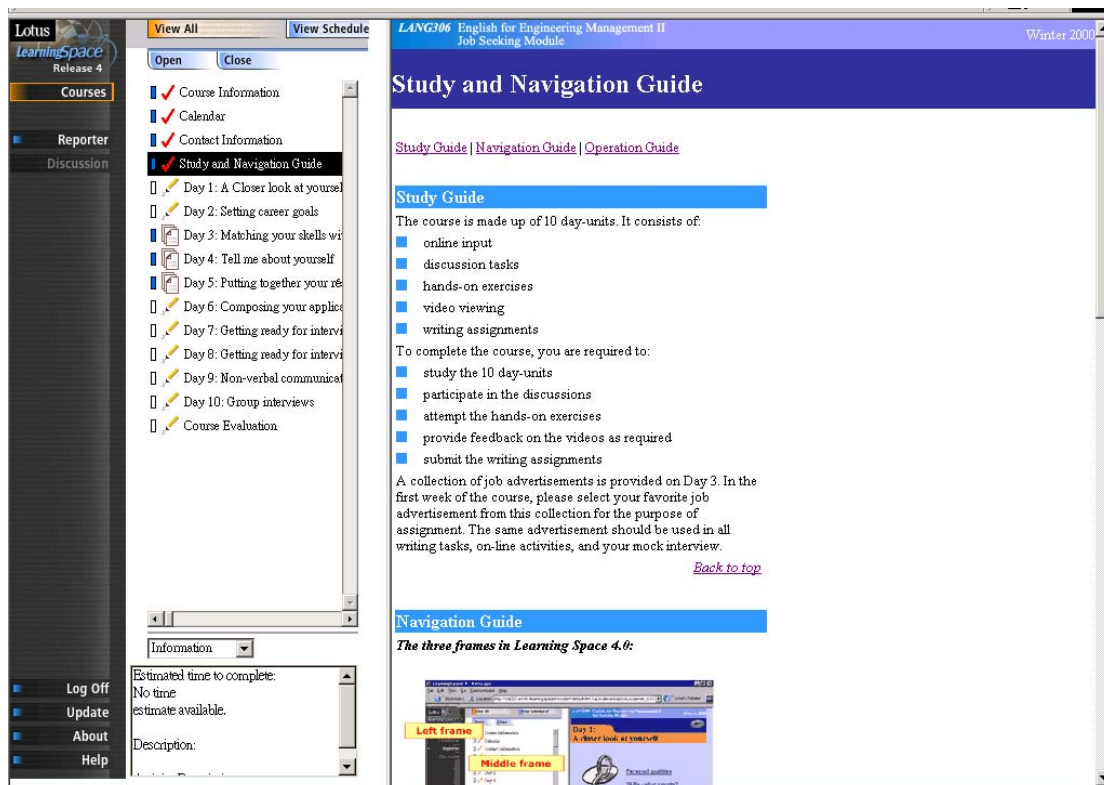


Figure 4: An Example of Study and Navigation Guide

By providing such a guide, learners of the course can get an idea of what the course contains and what the requirements at a glance. This helps them study more effectively.

## 2.3. Use of Language

### 2.3.1 Clarity

For writing online course content, writers should try to avoid using too much jargons, and too many acronyms and abbreviations. Some common examples are “booting”, “FAQ” (frequently asked questions), “FYI” (for your information). Other than these, writers should also be cautious when using terminology, like “application”, “button”, “soft and hard copy”, “drag”, “enter”, “window”. These words have different meanings in the world of the computer and we should not assume that every learner is familiar with them.

### 2.3.2 Consistency

Inconsistent language confuses readers. When writing online text, consistency of format, wording, and style should be maintained. For example, if we call it “the screen” in one place, do not call it “the monitor” somewhere else if referring to the same thing. It is important to keep it consistent because when phrasing, formatting, and displaying information consistently, readers can quickly learn the conventions used throughout the content. You can then rely on such conventions to make the

content more concise and dependable. Examples for course development are words like

- “Chapter”, “Unit”, “Topic”
- “the VDU”, “the screen”, “the monitor”
- “log on”, “log in”, “logon”, “login”, “sign in”
- “exit”, “log out”, “logoff”, “quit”

### 2.3.3 *Preciseness*

People learning with computers expect the computer to speak directly and accurately. So writers should try to keep syntax simple and edit for short clear text to raise readability. Here are some examples of comparisons between simple and less simple syntax:

- Decide / Make a decision; Survey / Conduct a survey of; Use / Make use of ;
- Set the chemical balance / You should by now have established the chemical balance; Please.../ It is recommended that you now..

However, the way of phrasing always depends on the nature and content of the course.

## 3. CONCLUSIONS

In this paper, I have tried to state the possible challenges faced by course developers in writing effective hypertext and making best use of it. I have also tried to summarize from literature and experience some of the guidelines for writing readable hypertext, with the hope of raising the awareness of online course developers. The following table reviews the main ideas:

Challenges for Writing Hypertext	Guidelines for Writing Readable Hypertext
Smaller Screen Display	Minimum of Text
	Chunking
Different Reading Habits and Behavior Online	Organization
	Function
Dropping Reading Speed Online	Clarity of Language
	Consistency of Language
	Preciseness of Language

Table 1: Review of Main Ideas

These guidelines may serve as reminders of some commonly known facts whose importance may have been overlooked. However, writers should always look at the nature and content of their course and write with flexibility.



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