

CHAPTER I

INTRODUCTION

1.1. Background

In today's world, many literatures are available in electronic format. The electronic documents are seen as having many advantages over its traditional counterpart: they are cheaper to reproduce, easier to distribute, and can be updated quickly. Electronic documents also consume less space for storage, and are virtually unaffected by age. Hyperlinks in electronics documents facilitate easy content navigation, while colors, animations and multimedia enrich the learning experience. These benefits fostered the proliferation of electronic documents.

The advantages of electronic document lure adopters. Offices went paperless, organizations built intranet to disseminate information to their users, education and trainings went online. More and more literatures are available on the Internet. During the past decade, huge sum has been invested in the hope of reaping the benefits of electronic documents. The supporters even look forward to the day when electronic documents replace printed publication.

Despite all these enthusiasm, there have been many complaints about the use of computers as the main device for reading electronic documents. Users complained about the drawbacks of reading on a computer screen. Others talked about the negative effects of long exposure to a computer screen. People often printed documents for reading purpose at offices that supposed to be paperless. Students, who

logically should become the earliest adopters, still printed most documents for studying. Longer literatures, such as textbooks, which should get the most benefit from electronic document characteristics, are rarely seen in electronic format.

The disparity leads to the question of whether electronic documents is actually more effective than using paper documents, particularly as a medium for transfer of information, or for reading or learning in a more common term. Question of whether the effectiveness of electronic documents is affected by various independent factors, such as display, screen radiation, display design, artistic effect, features, navigation, and computer familiarity also arises.

1.2. Problem Statements

Huge investments were made by organizations to reap the benefits of electronic documents. The investment might not be justified or might not achieve optimum result if the electronic documents cannot provide a more effective way of transferring information compared to traditional paper documents, assuming that effectiveness is an important factor for the investment. Management will want to ensure that the investment can really deliver the desired benefits.

The following research questions have been developed as investigative questions to address the needs:

1. Is learning using electronic document more effective than using paper documents?

2. Do any of the factors (display, screen radiation, display design, artistic effect, features, navigation, and computer familiarity) have effect on the effectiveness of electronic documents?
3. Is there any effect of display on the effectiveness of electronic documents?
4. Is there any effect of screen radiation on the effectiveness of electronic documents?
5. Is there any effect of display design on the effectiveness of electronic documents?
6. Is there any effect of artistic effect on the effectiveness of electronic documents?
7. Is there any effect of features on the effectiveness of electronic documents?
8. Is there any effect of navigation on the effectiveness of electronic documents?
9. Is there any effect of computer familiarity on the effectiveness of electronic documents?

1.3. Objectives and Benefits

1.3.1. Research Objectives

In general, this research aims to prove whether electronic documents is more effective than using paper documents as a medium for transfer of knowledge. The effectiveness in this context is defined as the easiness and speed in reading and understanding the meaning of or the idea presented in the document's content, plus the document impact on motivation to read and continue reading. Besides, the

research will try to find the correlations between effectiveness of electronic documents (dependent variable) with various independent variables:

- Display
- Screen radiation
- Display design
- Artistic effects
- Features
- Navigation
- Familiarity with computers

1.3.2. Research Benefits

The research will have impact on organizations that plan to implement or have implemented intranet, knowledge management system, paperless office, e-learning, and other usage of electronic documents. The results will provide additional justification to their decision if it is positive, or prevent unwise further investment if it is negative, assuming that effectiveness is the main objective of the implementation. The result of this research would help organizations to judge further investment in e-learning or knowledge management system. It will also enable organizations to put efforts to counter the ineffectiveness before they start the implementation if the research result indicates its existence.

The fact that users still often print electronic documents leads to a suspicion that electronic document effectiveness has been impeded by the one or more factors. This research will try to discover what factors influence the electronic documents

effectiveness. The result will help the company in deciding what preparation should be done before it moves to a paperless office or implements electronic education or knowledge management system. It will also affect organizations that supply the systems and hardware, for example display and system vendors, because it provides valuable inputs for product improvements. The result will enable them to prioritize their research or improvements efforts.

In the long term, the society will feel the benefits in the form of improved effectiveness of electronic documents, and considering the increasing adoption of electronic documents, a better medium for knowledge acquisition.

1.4. Research Scope

The study does not aim to measure the effectiveness of e-learning. In the author's opinion, e-learning describes the experience or the process of learning using electronic technology, and has a broader context. The effectiveness of e-learning involves many other factors besides the electronic documents as the main medium for e-learning. This research concentrates on the main medium used in e-learning, which is electronic documents, and their relative effectiveness as a medium for transfer of knowledge. The effectiveness can be measured in many ways. In this research it is described as the easiness and speed in reading and understanding the meaning of or the idea presented in the documents' content, plus the impact the documents' have on motivation to read and continue reading.

In this research, comparison will be done on electronic documents that are also available in paper form, for the purpose of more objective comparison. The

respondents will be population in Jakarta that has experience in using electronic documents.