

UNIVERSITI TEKNOLOGI MARA

**EVALUATING USER EXPERIENCE AND USER
SATISFACTION ON PACS (PICTURE ARCHIVING
AND COMMUNICATION SYSTEMS) IN
UNIVERSITY MALAYA MEDICAL CENTRE
(UMMC)**

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ABSTRACT

Medical image hard copies are very valuable reference document in healthcare industry. It is a reference document together with medical report used by doctors while assisting patients. The use of PACS solves problems related to storage and distribution of medical images and medical reports throughout the institution. Based on department documentation and user experience in UMMC, several issues pertaining to PACS have been highlighted, such as insufficient storage capacity, system downtime of 95% for last 12 months or 18 days downtime, image inaccessibility, lack of training and technology transfer and no online documentation or knowledge-base. As of today we do not know the user satisfaction level towards PACS. The questionnaire designed was based on Extended EUCS that was derived from the Extensive EUCS model by Aggelidis and Chatzoglou (2012). The objective of this research is to study the user experience to use PACS and evaluate the user satisfaction level.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Medical image hard copies are very valuable reference documents used in healthcare since the time when radiological machines has been widely used in the healthcare industry. Doctors can determine the patient's health status during treatment using these medical images. It is usually supported with the report by the Radiologists which are kept together with the medical image hard copies.

However, issues have been raised on the need for space to store the medical images hard copies. Furthermore the medical images need to be distributed elsewhere at the healthcare centre such as the radiology reporting room, clinics, wards, conference rooms, consultation rooms, meetings and doctor's office. It needs to be available anywhere in the healthcare centre whenever it is needed. Radiologists need to compare the latest image with the previous image(s) before they can prepare the report and it is always an issue when hard copy medical images are unavailable since it is not easily accessible. The doctors also need to compare the latest image with previous image(s) before deciding on the treatment for patients.

These issues have been largely alleviated with the introduction of digital image technology such as Picture Archiving and Communication System (PACS). PACS has been used to construct an efficient picture archiving and communication system which makes the medical images accessible online anywhere in the healthcare centre. PACS have been implemented to replace the traditional X-ray analogue film system. The use of IT systems in healthcare centres offers many benefits, including