

## **Online Instructional Consultation for Higher Education Institutions in Malaysia: The System Architecture**

Ang Ling Weay and Abd Hadi Bin Abd Razak  
UUM College of Arts & Sciences  
Universiti Utara Malaysia  
06010 Sintok, Kedah, Malaysia  
ling\_weay@yahoo.com and ahadiar@uum.edu.my

### **ABSTRACT**

Evolution of communication technologies at present gives impetus to researchers and practitioners by simply put the computer-mediated communication tools on their telementoring application without really understand its potential benefits. This causes several issues and challenges confronting existing telementoring program which are: (a) miscommunication due to lack of nonverbal cues, (b) the need of competency in written communication and technical skills, and (c) document recording, retrieving and reviewing. Thus, in this paper, the focus is the design and development of Online Instructional Consultation (OIcon) system for student and lecturers of higher education institutions. Hybrid modes of synchronous and asynchronous communication that provide nonverbal and verbal cues are incorporated in Online Instructional Consultation (OIcon) system to compensate the identified issues and challenges. We also focus on recording, retrieving and reviewing of recorded consultation document and management is also emphasized. The multimedia communication components from e-consultation model of financial and telemedicine context are adapted. The general structure, modules of OICON system, multimedia communication components, and communication server are illustrated and the potential benefits of OIcon system are presented.

### **KEYWORDS**

Online Instructional Consultation, Mentor-mentee System, Real time communication, Flash Media Server, Computer-mediated Communication

### **1 INTRODUCTION**

Online consultation or commonly known as e-consultation, one of the advancements of communication technology in various contexts [1], [2] and [3], offers great opportunity in enhancing information delivery across time and space. For example, in education contexts, telementoring evolved tremendously with the advancement of CMC tools. Evolution of communication technologies at present gives impetus to researchers and practitioners by simply put the CMC tools on telementoring application. The researchers and practitioners uncritically integrate communication technologies to facilitate online consultation without examining how the communication technology implemented in building and maintaining mentoring relationships. There are several issues remain unanswered which may lead to online consultation or mentoring frustration. These issues and challenges are (a) miscommunication due to lack of nonverbal cues, (b) the need for competency in written communication























