**Chapter 1  
INTRODUCTION**

**Project Context**

The rapid growth of web applications – application-oriented software delivered as a service over the Web – has revealed a lack of effective guidelines for their design and implementation. Existing Web guidelines hinder web application usability since they are primarily based on the interactions within a browsing metaphor. Interface design guidelines for client applications, on the other hand, do not address the conventions of web users, limitations of the web environment, or the new possibilities inherent in the Web. This paper outlines a set of guidelines for web application interfaces, which fuse translated client-application guidelines and re-purposed.

As web technology spreads the number, variety and sophistication of web-based information services is literally exploding. While some efforts have been put into managing a single, centrally controlled web site, current web technologies offer little applications in-the-large.

Management issues are treated through a framework which includes formally-defined notions for an information model, information base consistency, transactions and concurrency control. Thus, the system provides a semantically robust environment for web-based information services while allowing for Web source independence.

Today’s enterprises increasingly rely on the web to support their operations, global business alliances, and their integration to their suppliers, partners, and customers. In order to stay competitive, businesses must also respond to changing competitions of business environments in near real-time.

With the speed in which technology changes and modifies, the way people do things, every sector of society should be able to catch up with fast technological advancements. Computers as product of the world technology are a necessity in every home, organization, business or institution. Computers help people on a lot of ways and make work more progressive and productive. They bring advancement in technology and provide innovative ways in organizing and manipulating data. Having computer programs to more individuals and public and private organization is noticeable and is a valuable part of their daily operations.

Web-based applications have evolved significantly over recent years. With improvements in security and technology, there are plenty of scenarios where traditional software based applications and systems could be improved by migrating them to a web-based application. Some systems allow users to download large volumes of information onto a local memory storage device, which also minimizes the time the user is connected to the system.

Everything in this world has been changed from simple to most complex where almost all things are being computerized. Thus, computers and web-based applications are very efficient and useful as they provide an access to various information that users wish to acquire.

The Batangas State University Gender and Development Office (GAD) have been using the manual system in performing official tasks in the preparation of reports requested by other offices and agencies. This process really consumes time and effort by the officers and any upgrade or enhancement to the current system will be beneficial for the office.

The study’s main concern is to provide the Gender and Development Office (GAD) staff easier access and more efficient system on the management of the information regarding the curricular programs of the university. The system allows only valid users to access the system, which is the administrator. This system helps to know what changers should be incorporated to concerned areas which can save time and effort on the part of office staff since they can perform other tasks more efficiently.

**Statement of the Problem**

The study aims to develop a system for the Gender and Development Office (GAD) that can be used in the automation of generating reports.

Specifically, this study will find answers to the following questions:

1. How to develop a standardize online knowledge management system for gender and development office of Batangas State University?
2. How will C4.5 and Linear Search algorithm be used in the development of the website?
3. How will the proposed system be evaluated using ISO 9126 standard in terms of:
   1. Functionality
   2. Usability
   3. Efficiency
   4. Maintainability
4. How will the proposed system be implemented?

**Scope and Limitations of the Study**

The project covers the qualitative reports of the GAD. This covers only the files, modules, etc. The system will also provide information records of the students and programs.

Since the project will be a web-based application, it cannot be applicable through mobile. It can only be use through internet connection that directly leads the user to the site of the proposed web application. Users can perform complex tasks such as finding information about category of projects and its content.

This web-based application is an application that could just as well be a normal application. It’s just runs in a web browser.

The system will be administered only for the admin and staff of Gender and Development Office of Batangas State University.

**Definition of Terms**

To have a better understanding about the system development, the following terms are defined theoretically and operationally:

**Client*.*** An application or system that accesses a service made available by a server. In the system, “client” refers to the personnel of GAD and students’ workstations.

**Data Mining.** It is the process of discovering hidden valuable knowledge by analyzing large amount of data stored in databases or data ware house using various techniques.

**Gender and Development Office*.*** The Gender and Development Agenda (GAD) supports Batangas State University’s vision, mission and strategic goals, as embodied in its Strategic Plan. The GAD Agenda recognizes the various GAD commitments of the University under various gender-related laws and policies, which include, but not limited to, the Philippine Plan for Gender-Responsive Development Plan (1995-2025), Women in Development and Nation Building Act (Republic Act No. 7192), Anti Sexual Harassment Act of 1995 (Republic Act No. 7877), Anti-Violence Against Women and their Children Act of 2004 (Republic Act No. 9262) and the Magna Carta of Women (Republic Act No. 9710), Gender and Development Accord of Philippine Higher Education Institutions, CHED Memorandum Order No. 1, Series of 2015 (Establishing the Policies and Guidelines on Gender and Development in the Commission on Higher Education and Higher Education Institutions).

**Web Based Application.** It is an application that is accessed via web over a network such as the Internet or an intranet. It is also a computer software application that is coded in a browser-supported language (such as HTML, JavaScript, Java, et.al.) and reliant on a common web browser to render the application executable. Our system is an example of web based application.