

**EVALUATION ON THE USABILITY OF
HR COMPENSATION SYSTEM IN SMARTPHONES**



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Evaluation on the Usability of HR Compensation System in Smartphones

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The purpose of this study is to further the research on the usability of smartphone applications particularly in the area of HR Compensation System. HR Compensation, without automation, has always been tedious and time consuming to perform especially in large organizations. The first phase of the project involves doing a pre-survey to evaluate if there is a need to develop an HR Compensation Smartphone application and if there is, get the necessary features for creating the initial user interface design. The second and third phases involve building up a better user interface design based on feedbacks from user surveys. The final phase involves creating a fully-operational prototype based on the output from the second and third phases. With thorough evaluation, we will eliminate the assumption that HR Compensation System has no significant value or usability in smartphones. This will also allow for more consideration on other HR Systems like Recruiting subsystem, Work force planning subsystem and others to be direct future areas of research and implementation.

General Terms: compensation, compensation management system, smartphone application, database sync, synchronize, automation

Additional Keywords and Phrases: mobile, payroll, benefits, human resource, human capital management, recruiting, work force

1. INTRODUCTION

1.1 Background of the Study

HR Compensation tasks posed a lot of effort for companies and HR employees in particular because they were very time consuming due to the large number of processes needed to complete a single employee payroll computation. Manual HR Compensation systems suffered more than automated ones in a lot of scenarios due to high volume of employees but the problem this research would delve into is not only for manual HR Compensation systems but also for automated HR Compensation systems.

It is worthwhile to explore this research because automating HR Compensation systems were a daunting task and that is why there hasn't been significant improvement to fully implement HR Compensation systems into smartphone devices.

There hasn't been big significant improvements regarding HR Compensation systems used in smartphone devices and that is why this research needs to be conducted. This research, however, will focus more on developing and evaluating the usability of HR Compensation interface systems using smartphones.

To enable companies to gear towards a maintainable growing workforce, there is a need to improve employee accessibility of some employee information like checking payslips or salary details. Most employees now own a smartphone which they use to check information especially when they are mobile hence the need to implement it in smartphones.

Conducting the evaluation on the usability of HR Compensation UI systems in smartphones would further prove as a basis on how well the system will be utilized by people and may also serve as a starting point to break the barrier of obstacles that would hinder HR Compensation systems from being successful or usable in the market.

1.2 Technology Application Context

A. .NET Framework - is a technology that supports building and running the next generation of applications and XML Web services. The .NET Framework is designed to fulfill the following objectives: (1) to provide a consistent object-oriented programming environment whether object code is stored and executed locally, executed locally but Internet-distributed, or executed remotely, (2) To provide a code-execution environment that minimizes software deployment and versioning conflicts, (3) to provide a code-execution environment that promotes safe execution of code, including code created by an unknown or semi-trusted third party, (4) to make the developer experience consistent across widely varying types of applications, such as Windows-based applications and Web-based applications, (5) to make the developer experience consistent across widely varying types of applications, such as Windows-based applications and Web-based applications and (6) to make the developer experience consistent across widely varying types of applications, such as Windows-based applications and Web-based applications.

B. C# (pronounced "see sharp" or "C Sharp") - is one of many .NET programming languages. It is object-oriented and allows you to build reusable components for a wide variety of application types Microsoft introduced C# on June 26th, 2000.

C. ASP.NET MVC - is one of three ASP.NET programming models. It is a framework for building web applications using a MVC (Model View Controller) design: (1) the Model represents the application core (for instance a list of database records), (2) the View displays the data (the database records) and (3) the Controller handles the input (to the database records). Below shows the graphical representation of how the MVC communicates:

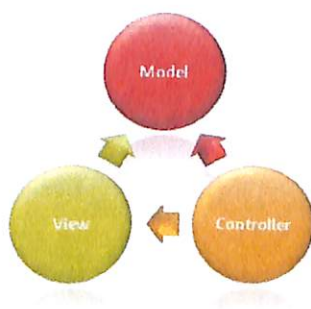


Figure 1.0.MVC graphical representation. Referenced from http://www.w3schools.com/aspnet/mvc_intro.asp.

The Model is the part of the application that handles the logic for the application data. Often model objects retrieve data (and store data) from a database.

The View is the part of the application that handles the display of the data. Most often views are created from the model data.

The Controller is the part of the application that handles user interaction. Typically controllers read data from a view, control user input, and send input data to the model.

The MVC separation helps you manage complex applications, because you can focus on one aspect a time. For example, you can focus on the view without depending on the business logic. It also makes it easier to test an application.

D. SQL Server - is a relational database management system (RDBMS) from Microsoft that is designed for the enterprise environment. It runs on T-SQL (Transact -SQL), a set of programming extensions from Sybase and Microsoft that add several features to standard SQL including transaction control, exception and error handling, row processing and declared variables. Codenamed Yukon in development, SQL Server 2005 was released in November 2005. The 2005 product is said to provide enhanced flexibility, scalability, reliability and security to database applications and to make them easier to create and deploy thus reducing the complexity and tedium involved in database management. SQL Server 2005 also includes more administrative support.

E. Telerik's Kendo UI – provide jQuery-based user interface widgets that give developers the ability to create standard themes and even better interfaces on smartphones from their powerful toolset. It is also mobile-friendly, responsive and has built-in customizable themes.

F. WCF (Windows Communication Foundation) - is a framework for building service-oriented applications. Using WCF, you can send data as asynchronous messages from one service endpoint to another. A service endpoint can be part of a continuously available service hosted by IIS, or it can be a service hosted in an application.

1.3 Problem Statement

Locally in Mindanao, HR Compensation software is not that very popular because we cannot find big companies that have transformed their existing HR Compensation to include mobile technology. Most of the existing HR Compensation systems still use a paper based payslip. Employees do not experience a 24/7 access to information related to their salaries. Employees usually own a smartphone, thus creating a mobile application that will allow them to view their salaries will be beneficial.

Currently, companies are still looking into how they could optimize their HR processes and most especially in the HR Compensation area. Although the technology trend is already capable to perform the technical implementations, there still needs to have a study to really prove that implementing HR Compensation in smartphones is feasible. In light of these problems, we will ask these research questions:

- 1.) What is the extent of need in innovating the HR Compensation Management System to include smartphone devices?
- 2.) What kind of interface will work for the users of the HR Compensation Management System?
- 3.) How effective is the proposed HR Compensation Management System interface?
- 4.) What is the level of satisfaction of the users who use the HR Compensation Management System interface?

1.4 Objectives

Following are the aims and objectives of this research project:

- 1.) To understand the need for innovation of HR Compensation systems in selected companies.
- 2.) To understand the level of usability on each of the proposed HR Compensation System user interfaces in smartphones.
- 3.) To develop a user interface (UI) using the usability principles of the HR Compensation System in smartphones.
- 4.) To determine the effectiveness of the HR Compensation System interface in smartphone devices for implementation

1.5 Significance of the Study

HR Compensation system will help companies worldwide in efficiently managing their human resource operations particularly in Compensation systems.

This study will help to determine the effectiveness of using a Smartphone HR application in businesses by making it easier for them to manage their HR operations. HR Compensation System smartphone app will help the organizations to meet and exceed their individualized Payroll and Benefits needs.

This study also focuses on the effects of the smartphone app on managing the sub-modules of a HR Compensation System: Payroll, Merit Increase and Attendance on the smartphone. This technology will streamline the HR processes and will effectively reduce administrative burdens.

Furthermore, this will help organizations to reduce their HR administrative and compliance costs. If the usability of this smartphone app becomes high, then it will enable the organizations to compete more effectively for their global talent. Moreover, the improved service with ease and time saving access to data for employees and managers will make this process easy to run for the organization.

The following will also benefit the study:

- A. Employees – access to up-to-date payslip information and historical figures.
- B. Payroll Masters and Administrators – conveniently able to create, show and hide fields for displaying data to employees' compensation screen.
- C. Company – employee satisfaction through the use of HR Compensation App in smartphones.

1.6 Scope and Limitations

The study limits itself to the following:

- 1.) Human Resource Information System has a very huge scope and it shall be known that the study will only delve on the following Compensation Subsystem interface modules: Payroll and Benefits.
- 2.) Accessing the most current information about employee salaries and current data on the external market could be a very big task. So for this study, salary surveys shall be dated by as much as two to three years.
- 3.) It is often time-consuming to track and capture salary information for all individuals in the company. Therefore, the scope of the Compensation solution will only include being able to access, collect and summarize the latest wage and benefits data for both internal and external labor markets.

- 4.) Smartphones category include both “smarter” mobile phone (smartphones) and tablet devices. For this study, we will concentrate on the smartphone interface designs only.
- 5.) Creating new fields in database synchronization tool could be applied to different targeted tables but displaying the new fields in the mobile app, although it can be done, is currently limited only for viewing inside the Personal Information.
- 6.) Employee’s password is currently limited to the default generated password. “Modify Password” function can be added later on if the project is fully implemented.
- 7.) The smartphone application also is currently limited to android phones because other phones have a styling issue. Although it could still be viewed, it is not advisable because the study is basically involved in the user interface design.

1.7 Definition of Terms

1. UI – User interface; Visual part of computer application or operating system through which a user interacts with a computer or a software.
2. HR – Human Resources; A department within an organization that deals with the people who work for that organization.
3. OHS – Occupational Health & Safety; It is concerned with protecting the safety, health and welfare of people engaged in work or employment. The enjoyment of these standards at the highest levels is a basic human right that should be accessible by each and every worker.
4. ICT - Information and Communication Technologies; refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT) but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication mediums.
5. Compensation - can be defined as all of the rewards earned by employees in return for their service or work done.