

Effectiveness of Online Job Recruitment Systems: Evidence from the Royal University for Women

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Abstract: *Recently, Information and Communication Technologies have introduced new practices in Human Resource Management functions such as Online Recruitment. This research is aimed at developing a web-based and central recruitment Process system for the Royal University for Women (RUW) Human Resources department. The online recruitment software would facilitate the fast and accurate selection of qualified applicants. Recruitment is important for organizations since it performs the essential function of drawing an important resource into the organization. It has a strategic aim as it focuses on the need to attract high-quality people in order to gain a competitive advantage. RUW Web based Recruitment Management System provides a powerful, effective and efficient recruitment process. The proposed web based system provides an opportunity to facilitate and shorten the time of the recruitment process. It makes a significant contribution to RUW's reputation.*

Keywords: *Recruitment, HR Department, Processes, Online Tracking*

1. INTRODUCTION

Nowadays, many business organizations depend and mainly focus on Information Systems for many reasons; first, they aim to handle and manage their operations effectively. Second, Information Systems are utilized to achieve competitive advantage, so organizations can compete with other firms in the market place (Laudon, 2014). For example, organizations are using information technology to reach customers over the internet through the online services, and manage their human resource needs (Zwass, 2013).

The main goal of this research is to develop a Web Based Recruitment Management System for the HR department at the Royal University for Women (RUW). RUW Web based Recruitment Management System is a web based system that help the HR department to manage and improve the recruitment process; it will also save their time searching for a suitable employee for vacancies. RUW Web based Recruitment idea emerged to make this work more professional, easy and advanced in the same time; by adding a link on RUW website that will allow the applicant to apply for vacancies based on the requirements that have been collected from the colleges/units by the HR department.

Earlier RUW recruitment was done manually and it was time-consuming. Royal University for Women used a manual recruitment process for the applicants who are willing to apply for a specific job through very long procedures that wasted time for both the human resource department and the applicant. Furthermore, the existing system does not provide the information that the human resource department are looking for. This makes the present recruitment process inefficient and involves a lot of steps.

To overcome the above weaknesses, we developed a web-based and central recruitment system that provides a powerful, effective and efficient recruitment process. The proposed web based system will provide an opportunity to facilitate and shorten the time of the recruitment process. In addition the web site will be easily accessible by any person who is looking for a vacant job.

RUW Recruitment management system would make vacancies of RUW easily available on the web site, accessible for job applicants and reachable for tracing the registered requests. Job applicants can easy track the status of their job applications. This will shorten the time of application and make all vacancies information available to a wide range of future employees. The main processes in this system include; register online, create account online, profile online, complete profile online, check status and vacancies online in RUW Recruitment system.

2. RESEARCH METHODOLOGY

Agile software development was utilized in the development of RUW Recruitment management system. Agile software development is a rapid and iterative method. The software comes in increments based on requirements and feedback that can be able to change if there are any comments. Moreover, the aim of the agile method is to respond quickly to change requirements step by step and the stakeholders are totally involved (Summerville, 2011). Extreme programming is one of the most common agile methods. It is a widely used method because it is focus in coding rather than designing. It starts by selecting the user stories and then break down the stories to task, plan, develop, integrate, and finally release the software and evaluate the system.

3. ANALYSIS AND DESIGN

3.1. Requirements Determination

We have utilized two techniques to collect our requirements; interviewing and questionnaires. The purpose of interviewing is to get an in-depth understanding of the organization's objectives, users' requirements and roles. The personal contact allows the interviewer to respond adaptively to what is said; it is possible to probe in greater depth and if the interviewee has little or nothing to say, the interview can be terminated (Laudon, 2014). The interviews were conducted with the HR department officers and manager. We have asked the HR department some questions about the existing processes and ideas to improve them based on their experience in order to simplify the process among their needs. In the next interview we met the HR secretary, the detailed information was taken from her based on her knowledge and work experience in the HR. The existing recruitment process starts by collecting departments and staff needs and fill a form to check for vacancies, then the HR posts advertisements in the website to announce it online, also they post the advertisement externally outside Bahrain. Then, once CV's received it will be sent to all colleges. The qualified CV's will be on focus to meet the applicant and take an appointment with them for an interview based on their schedule. At the end the HR secretary will prepare a final report on the recruitment statistics, number of the applicants and the implementation of the recruitment plan. The HR department suggests for us to have a look over internal and global websites around the world to have several ideas to be a professional work.

The purpose of questionnaires is to obtain the views of large number of people, in a way that can be analysed statistically and gathering opinion as well as facts. It has many advantages such as; economical way of gathering information from a large number of people, effective way of gathering information from people who are geographically dispersed and a well-designed questionnaire can be analysed by computer (Creswell, 2014). We have distributed the survey to HR department and RUW employees to collect requirements and see their comments that need to be added in our system. The questionnaire consists of 6 items to collect their feedback and valuable comment to improve the existing online recruitment process. Please refer to the appendix for the survey questionnaires. The comments that have been collected from the Survey are:

RUW needs to improve the existing recruitment process.

Improve the online process. For example: completing an online application by the applicants, create an account before applying for a job, status tracking etc...

Problems with lost CVs, totally preferred that it would be online.

Automated responses.

Implementing online tracking of application status.

Database of all application with appropriate categorization.

Alerts for relevant people once applications are received and processed.

3.2. Functional Requirements

The Functional Requirements cover the functionality of a system and how it is act, specifying what the system should actually do. The Functional Requirements of RUW recruitment web based system include:

- Applicant should be able to register online in RUW Recruitment system.
- Applicant should be able to create account online.
- Applicant should be able to create profile online.
- Applicant should be able to complete profile online.
- Applicant should be able to check job application status online.
- Applicant should be able to view vacancies online.
- Guests should be able to view content “vacancies” in RUW Recruitment system.
- Admin should be able to log in RUW Recruitment system.
- Admin should be able to delete applicant information.
- Admin should be able to view applicant information.
- Admin should be able to change status online.
- Admin should be able to send email and conformation to applicants.

3.3. Non-Functional Requirements

Non-functional requirement (Quality Attributes) cover the requirements that are not listed above in the functional ones and it shows the performance and the operational part of the system. The non-functional requirements of RUW Recruitment web based system include:

- Availability: The web based system will be available 7 days a week and 24 hours for everyone.
- User friendly and simple.
- Runs on several kinds of browsers.
- Usability: The web based system is easy and good for novice’s users.
- Runs on many kinds of hardware’s such as; Laptops, Computers, Smart phones ... etc
- The connection of internet is necessarily required.
- Security: It’s secure enough for users with authentication and authorization checking.
- Performance: pages load quickly and response quickly.

3.4. Major Modules

The main modules for users/applicants in RUW Recruitment website are:

- Home
- About us
- Contact us
- Current vacancies
- RUW Recruitment process
- Working at RUW
- Our University

The main modules for admin in RUW Recruitment website are:

- Log in / out.
- Home page
- View’s applicant’s information
- Vacancies
- Contact us

Sends Emails

View all SQL tables

Updates website contents and images (CMS)

The sub modules for users/applicants include:

Home: welcoming page, pictures slideshow, sub-titles, and two paragraphs of information for the user to read, a login if you are an existing user or signup if you are a new user.

About us: about RUW, Mission, and Vision.

Contact us: Send us email, Contact us details.

Current vacancies: a list of the available vacancies at RUW.

RUW Recruitment process: Explaining the Recruitment process from applying stage till the end.

Working at RUW: information about working at RUW.

Our University: link to the main website of RUW.

The sub modules for admin include:

Home page: after the admin log in to the system, it will be able to print, view, and log out.

View's applicant's information: there is a table for the applicants who apply, and the admin can select the FID to get the entire information for each applicant. And there text box allow the admin to insert the applicant FID to change its current state. And this process is done through several pages in the admin page; Applying, Screening, Interview, HR& HEC (Higher Education Council) approvals.

Vacancies: the admin can organize the applicants among several categories based on their college or department.

Contact us: the comments that have been sent by users, the admin can view them and reply back to them by email.

Sends Emails: Sends Emails when it is required.

All tables: view all SQL tables

Updates website contents and images (CMS): the admin can update the information and images in the website.

3.5. Detailed System Design

3.5.1. Website Logo Design

The title and the logo of our system were designed as it's required in formal way that suitable to the Royal University for Women main website "RUW Recruitment" to be a link in the main website. Moreover, the colors chosen are matching the colors used in the RUW site. We have chosen the purple, pink and grey with a consideration of the consistency and websites rules. The Website logo is shown in figure 1.



Figure1. *RUW Recruitment Logo*

3.5.2. Website Home Page Design

RUW Recruitment Home page is the main page in the website which contains the logo, slideshow pictures, main buttons on the left side that allow the user to explore the system from page to another.

Besides that there is an existing user text box to allow the user to access if he or she registered before, and new applicant button that allow the user to register; once it registered the button will be removed from the list and several steps will show to complete the profile. Also, there is some content related to RUW and HR department and some content in the bottom of the page.

3.5.3. Current Vacancies Page Design

Current Vacancies page contains the jobs opportunities that RUW offers, these are the open vacancies and once the position is filled, the admin will delete the job. The open vacancies are based on the HR posts for the current year, once the user click on the job, the list of the requirements needed will display to apply for a specific job or it can be more than one job as well.

3.5.4. RUW Recruitment Process Page Design

A static page that explaining in details how your application will go through several steps from applying, submit, screening, Interview, HR & HEC Approval till the candidate starts the job. This process will be covered clearly after the applicant complete the profile and these steps will be tracked online by the user.

3.5.5. Website New User Sign Up Page Design

This page allows the user to register to the website through two steps which is to create your profile, the user have to fill the needed information and be careful of the validation and read the messages. After step one the page will go to step two and the information that was inserted before it will be directly there in step 2 for accuracy and to avoid errors, so the user need not to fill them again. Once step one and two are completed and have been submitted, profile will created for the user.

3.5.6. Website Profile Section Page Design

This page is mainly the engine of our system where the applicant is required to complete the profile section. The profile section contains four parts: Personal Details, Education & Experiences, About Us, and Declaration. Each part of them requires information to be filled in order to allow the applicant to apply for the job, because if one of these four parts is missing the applicant will not be able to apply. Many of control have been used here, and with every step that is successfully completed, the red icon will be replaced to green tick. After all of the four are replaced with green tick, the applicant will successfully apply to any of the vacancies listed in the “current vacancies”. There is also four more icons on the top of the profile section; Application Status: to allow the user to track the application of the job online easily and an email sent to inform the user with every new state; View complete profile: all the information that the user has provided in the four steps in the profile section will appear clearly in one page; Sign out: to log out of the website; Account Setting: to allow the applicant to change password, email address and even to deactivate his account for security measures.

3.6. Admin Interface

3.6.1. Login Page Design

The login page is separated from the main system to be more secure; The HR staff only have access to the admin page that contains all information about the RUW Web Recruitment Management System.

3.6.2. Admin Home Page Design

The admin home page consists of many pages to view the applicant’s information and the admin can also print them out. Applying: There is a table for the applicants who have recently applied and the admin can easily access their information by selecting the FID and also there is a text box to insert the applicant FID and to change its current status to screening or to reject its application. Screening: There is a table for the applicants whose job applications have been selected for screening and the admin can easily access their information by selecting the FID and also there is a text box to insert the applicant FID and to change its current status to Interviewing or to reject its application.

3.6.3. Vacancies Page

The admin can organize the applicants among several categories based on their college or department. For example those who have applied for the college of business will be categorized there.

3.6.4. CMS

The admin can control the system by updating the information, images, content, removing or adding jobs in the website.

4. IMPLEMENTATION AND TESTING

4.1. Software Development Platform

We have used Visual Web Developer to implement our system. Visual Web Developer is a tool used to create and work with ASP.NET Web applications which allow the users to build a system and design it in a simple way with a lot of tools that can be used to create a website. The language used is HTML and C# which they are a simple and easy to learn and providing much functionality.

4.2. Validation

The main advantage of using the agile approach is receiving feedback from the stakeholders, because they are totally involved. We have interviewed all the involved stakeholders and we have received their feedback and comments, and these comments have been reflected and based on such feedback we have modified our system.

We have validated the system with the HR department because they are the one who will use this system; they are our target customer. They went through the procedure and they give us some comments regarding the applicants information and how should be written. Their overall feedback that it's really good because the existing process is not effective, and it would be a good opportunity if the HR department will use it. They provide us with some comments in the admin page to organize the applicants based on some categories.

Another validation meeting was arranged with the system administrator. He provided us with valuable feedback; he asked us to add two main things for the project value; a picture in the CV and to allow the applicants to apply for more than one job. So we have worked on these comments and we reflected them. Finally, we have validated the system with some selected faculty members and the student affairs department.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Summary & Discussion

In this project, we developed a web-based and central recruitment Process system for the Royal University for Women Human Resources department. RUW Web based Recruitment Management System provides a powerful, effective and efficient recruitment process. The proposed web based system provides an opportunity to facilitate and shorten the time of the recruitment process. Earlier RUW recruitment process was done manually and it was all at a time consuming work. It was developed in order to use a web based system rather than using papers and manual process which is time consuming. It provides a great tool for the applicants to track their application online.

5.2. Recommendation

We recommend college of IT students expected graduates to choose final year project ideas that will increase their knowledge, help them in their future career, and that will contribute to the development of our university. Also, we recommend them to manage their time while working on final year projects.

5.3. Future Work

Our future plan is to add new features and to improve the security as we know that the personal information is really sensitive and we are dealing with confidential information. Finally we would like to conduct the job interview online within our system and we would like to see that our system published at RUW website.

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Appendix: Survey Instrument



This questionnaire is part of a study underway entitled “**RUW Web based Recruitment Management System**”. This study examines how the existing RUW recruitment process work and how the online recruitment process can be improved.

Item #	The Item	Strongly Agree	Agree	Uncertain (Neutral)	Disagree	Strongly Disagree
1.	The existing recruitment process is satisfying					
2.	The advertisement for vacancies are easy to find					
3.	Applying for a job is an easy process					
4.	The requirements listed for a job are enough					
5.	The status of the job application is easily tracked online.					
6.	Improving the existing online recruitment process is needed					

Please provide your valuable feedback on how RUW can improve the existing online recruitment process.

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