

Implementing for paperless process through the employee database management system - Case study (With Special Reference to Non Academic Establishment Division in University of Kelaniya)

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Abstract

In Global competitive environment, Employee data base management is a really powerful system is the public sector organization. Most of the Public Sector Organization doing their works through the manual system. According to the present situation of the global world social distance is more important. On that situation the public sector organizations find the solutions to do their works efficiency. Hence, the key objective of this study is to understand the existing process increment form procedure in non-academic staff and introduced paperless process through the fully automated system to preparing salary increment. Sample data were collected from the existing increment form process of the university in the last three years and simple statistical tools such as mean values and percentage values were associated in the analyzing process of the study. The results showed that there was a waste due to unnecessary processes and practices in the existing process and therefore it leads to inefficiency in the system. The proposed automated system include paperless process and save the cost and time through the efficiency of system.

Key Word: Paperless process, Employee database management system, Efficiency, public sector

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I. Introduction

Introducing Employee management system is not easy to the public sector organization which is mainly base on the employee performance and fulfil the organization vision and mission through the organization objectives. Because of Most of the employees did not like to change their day to day activities. Using the employee data base management system, administration can to reduce their complex situation. The employee management system is design for saving cost, time, power and work activities well for employees. The employee management system directly connect with the employee performance and efficiency of the employee. In this system can manage all the details about the non-academic staff employee details, Such As their qualification, performance. Payroll details and maintains the information about the personal details of their employees. The organizations can introduced various type of employee data base management system. Because of the necessity information or details are not equal in every public sector organization. The University system is consider as one of the biggest powerful weapon in Sri Lanka which are consist of 7847 teaching staff and 15151 non-teaching staff handle by the University grant commission. (Sri Lanka University Statistic 2018). The University of Kelaniya is not maintain the Non Academic employee data base management systems yet. All the Non Academic Personal files and other necessary details are maintain by through the manual system. The manual system has identify various type of weaknesses. There are Seven hundred forty two non-academic employee personal files, handle by the non - academic establishment division. These employees can be categorized through the forty one non-academic post. The Non Academic establishment has twelve management assistant and they have involved to handle the all non- academic details through the manual system. Specially, Management Assistants in the Non Academic Establishment branch have to maintain all the personal information and organization information who are recruit the first day to end day of the service. Employee Management system is very important. Because it should be better prepared and avoid making the same mistakes again. Administration can get many advantages by using EDMS. Such as the proposed system is more user friendly, flexible and reliable, quick information Access, Timely report generate and reduced manual work. The Main objective in this research is paperless and reduce the effort of administrative work. The Proposed EDMS consist seven modules. These are Personal Details, Profession Qualification, payroll, performance, training and retirement. The employee data base management system is design for saving money, time and

power and work well for the team also. In an organization to simplify the process of record of maintenance it is designed a system of Employee management. For HR function it helps to handle the employee's information. For improving effectiveness of workplace management an employee management system is implemented. This employee management system handle the overall performance and different aspects of an employee in an organization. There are more benefit for introducing paperless work. (Plimmer & Apperley, 2007). Change is rarely easy, particularly on an organizational level. Because peoples are resistant to change their behavior. Most of the employees want to do their regular activities in manual way. (Chao, 2015).

Objective:

- To understand the existing manual process in employee salary increment
- To introduced paperless process in employee salary increment

The problem identification

Manual handling Information is critical part of the organization. Because of all the information are not secure. Mainly, the public sector organizations faced many problems to implement such a system. One of the thing is insufficient human and material resources and capacity available for the implementation. Because of public sector organizations are run by the government funds. Most of organizations are not earn funds. On that situation they have to face many problem. Another thing is management is not get the priority to implementation and lack of organization commitment. Present situation, Most of the employees are resistance to change. They want to do same procedures and using paper process. All the documents are filed. Some employees have more files. Some personal files are not completed. Because some Increment decisions are not attached. Some salary steps were not given according to the some situation and some document are missing in various type situation. Hence, time to time personal files handing persons are transfer in various situation. On that Occasions Head of the Department or Management have to solve these problems. Rarely, some employees file the law cases against the organizations.

Existing System

The Employee data base management system is every important today. Because of present situation of the world, social distance is necessary for persons. On that way every organization wants to do their works through the system not physical attendance. In Present all the Non Academic employee's personal and official details were handled by the non- academic establishment division through the manual system using record method. Personal files that were created in first day of employees. All the details are filed. It is complicated. Because of it is need for extra effort to doing that works, time and cost effect. Sometime data are not available on time because it get more time to calculate or collect some information. Once a year every employee increased their salary through the recommendation of relevant Head of Department. According to the Establishment code, increment period base on the one year, two month before the completed one year the subject clerk should have check the personal file carefully. After that subject clerk fill the increment form according to the personal file details. Then that subject clerk send the form to leave clerk to fill the leave base on the leave record. Filling all the necessary details, that document send to the Head of the Department/ Non Academic Branch for sign. After that Increment form document send to the relevant Department to get the recommendations. After receiving recommendation document to the Head/ Non Academic, The Subject Clerk has prepared the present salary scale and inform the necessary document to the salary branch through the head/Non Academic. Finally, employee can get the present salary.

Table One – The leave form preparing by the Non - Academic Establishment division for nonacademic staff

Number of Employees	Year			Average Per Year
	2017	2018	2019	
	695	725	742	720.6

Source: Observation Data 2019

The table one shows, number of employees who qualified for increment every year the non-academic establishment division and the staff of non - academic branch should prepare increment documents through the personal files of employees.

Table two –The time taken in each position in existing increment form procedure

Description	Year			Total	Mean
	2017	2018	2019		
Number of Increment forms	695	725	742		
According to the personal file fill the Increment form (Personal File subject	695x 30 min ¹ 20850 min 347.5 hours	725x 30 min 21750 min	742x 30 min 22260 min	64860 min 1081 hours	21620min 360.3 hours

Clerk)		362.5 hours	371 hours		
Fill in the leave record (Leave Clerk)	695x10min ² 6950 min 115.8 hours	725x10min 7250 min 120.8 hours	724x10min 7240 min 120.6 hours	21440 min 357.3	7146.6 min 119.1 hours
Check and Sign (Head/ Non Academic)	695x7min ³ 4865 min 81 hours	725x7min 5075 min 84.5 hours	724x7min 5068 min 84.4 hours	15008 min 250 hours	5002.6 min 83.3 hours
Fill the Increment form base on the employee performance	695x20min ⁴ 13900 min 231.6 hours	725x20min 14500 min 241.6 hours	724x20min 14480 min 241.3 hours	42880 min 714.5 hours	14293.3 min 231.1 hours
Preparing present salary scale	695x10min ⁵ 6950 min 115.8 hours	725x10min 7250 min 120.8 hours	724x10min 7240 min 120.6 hours	21440 min 357.3	7146.6 min 119.1 hours
Total	53515 min 891.7 hours	55825 min 930.2 hours	45206 min 937.9	165628 min 2760.1 hours	55209.1 min 912.9 hours

30 min¹ – This time included check the employee personal file and fill the Increment document according to the details.

10min² – This time included fill the leave record according to the previous year.

7min³ – This time included check and sign the document to Head of the department/ Non Academic Establishment branch

20min⁴ – This time included fill the Increment form base on the employee performance. The relevant Head of the Department discuss with the employee and then fill the document.

10min⁵ – This time included, After the Recommendation of Head of the Department, The Subject clerk in personal file handling, preparing present salary document to send the salary and loan division.

Table 02, show the time taken in each station of the existing Increment form process. The name of the five stations, which the data obtained were, According to the personal file fill the Increment form, Fill in the leave record, Fill in the leave record, Check and Sign the Head/ non- academic establishment, respective department fill the performance of employee and then preparing present salary scale in non - Academic Branch to send the salary division. The time is taken by each station in respective years and mean time indicated in table 02.

Table 03: The Salary Increment document transportation time

Description	Year			Total	Average Time
	2017	2018	2019		
Number of Increment forms	695	725	742		
Employee to first point	695x2min ¹ 1390 min 23.1 hours	725x2min 1450 min 24.1 hours	742x2min 1484 min 24.7 hours	4324 min 72 hours	1441 min 24 hours
Employee to second point	695x3min ² 2085 min 34.75 hours	725x3min 2175 min 36.25 hours	742x3 min 2226 min 37.1 hours	6486 min 108 hours	2162 min 36 hours
Employee to third point	695x300 min ³ 208500 min 3475 hours	725x 300 min 217500 min 3625 hours	742x300min 222600 min 3710 hours	648600 min 10810 hours	216200 min 3603 hours
Employee to fourth point	695x30 min ⁴ 20850 min 347.5	725x30 min 21750 362.5 hours	742x30min 22260 min 371 hours	64860 min 1081 hours	21620 min 360.3 hours
Employee to fifth point	695x300 min ⁵ 208500 min 3475 hours	725x 300 min 217500 min 3625 hours	742x300min 222600 min 3710 hours	648600 min 10810 hours	216200 min 3603 hours
Employee to sixth point	695x300 min ⁶ 208500 min 3475 hours	725x 300 min 217500 min 3625 hours	742x300min 222600 min 3710 hours	648600 min 10810 hours	216200 min 3603 hours
Total	649825 min 10830 hours	677875 min 11297.9 hours	693770min 11562.8 hours	2021470 min 33691 hours	673823 min 11230 hours

2min¹ – This time include Personal file subject clerk send to the salary Increment document to the Leave clerk

3min²- This time include salary increment document send to the Head of Department/ Non Academic for check and sign.

300 min³ – This time include, the salary increment document send to the relevant department. The mail operate twice a time in per day (9.30 a.m. and 2.30 p.m.).

30 min⁴ – Relevant Department subject clerk enter the document then send to the Head/ Relevant Department.

300 min⁵ – This time include, after the recommendation, the relevant department send the increment document to the non-academic establishment division.

300 min⁶ – This time include, after finish all the documentation work, the present salary step send to the salary and loan division.

Table 03, shows the time taken for transportation in the existing Increment form process. There are six transportation gap. The average time taken for transportation in each gap shows 24 hours, 36 hours, 3603 hours, 360.3 hours, 3603 hours, and 3603 hours respectively. After the observations and the discussions held with the employees, carefully measured the time using a stopwatch.

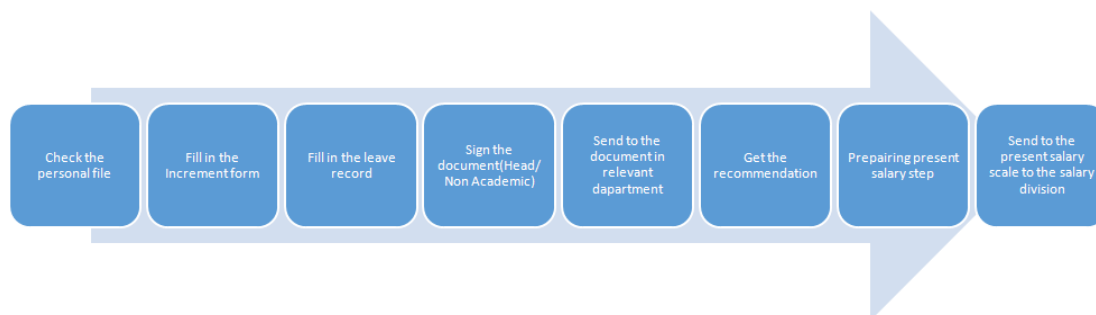


Figure 01: The Existing Process of preparing Increment process in Non - Academic Staff

Figure 01 illustrates the Increment form transportation process of existing IFP of the University of Kelaniya. According to the University Establishment Code, employees are eligible to annual increment. The employee have to complete satisfactory performance within one year in relevant department. After the recommendation of relevant Head of the department, The Head/ Non Academic Establishment division put the present salary step.

Table 04 - The Total Average Transportation and Process Time and Cost

Cost Components	The Average measurement	Hours	Value
The No of Increment forms	720		
Process Time	55209.1 min	912.9 hours	912.6x180*= Rs. 164268.00
Transportation time	673823 min	11230 hours	11230x180*=Rs. 2021400.00
Total			Rs. 2,185,668.00

Proposed System

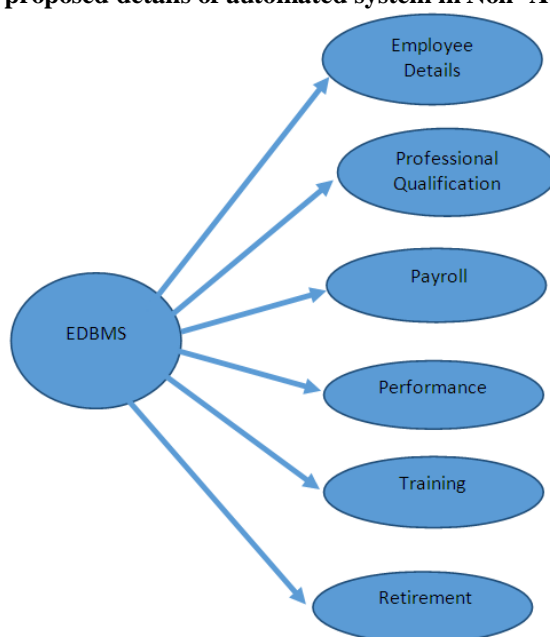
The Proposed system can eliminate all the difficulties of the existing manual process. The every data of employees is classified into sub categories for fast searching information. This system shall responsible for handle all the information like employee details, professional details, pay roll details, performance details, training details and retirement details, etc. The Management can access quick important information like email id, contact number, appointment dates, etc. The main features in proposed system is User friendly, secure, portability and speed. The Main advantages is cost and time saving. Another benefits are

Table 05 - The Average Measurements: for Proposed Increment form process Management Map

Cost Components	The average measurement	Hours	Value (LKR)
No of Increment form	720	-	-
The Increment form auto generated through the system and send to the Head of the Department	720x1 min 720 min	12 hours	180x12 Rs. 2160.00
Send the document to relevant department for get the recommendation	720x5min 3600min	60 hours	180x60 Rs. 10800.00
After recommendation the Increment form send to the Head/ Non Academic for approval	720x1 min 720 min	12 hours	180x12 Rs. 2160.00
After that the new salary step send to salary and loan division	720x1 min 720 min	12 hours	180x12 Rs. 2160.00
Total			Rs.17280.00

Source: Observation Data, 2019.

Figure 02: The proposed details of automated system in Non- Academic staff



II. Conclusion

Finally, the system is timely useful for all the non-academic staff in university system to get the information without any effort, Because of all the information has generated by the system. Going paperless has many advantages. Some of them are increased efficiency, paper and printing cost savings, time savings, storage cost savings, environmental benefits, efficient file retrieval, and enhanced customer service.(Litalien et al., 2009)

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