Teaching Human Resources Management Systems using Microsoft Dynamics AX

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Abstract: This paper presents techniques used to teach Human Resource Management Systems utilizing Microsoft Dynamics AX in a college classroom. The paper describes an approach of teaching the topic which includes suggested readings, a handout for in-class activities using the Microsoft Dynamics AX software, and a sample of a class assignment used to assess student learning. The student learning outcomes and results from the sample assignment are included.

INTRODUCTION

Human resources (HR) or human capital refers to the people who make up the workforce of an organization. Human Resource Management (HRM) refers to "the process of acquiring, training, appraising, and compensating employees, and of attending to their labor relations, health and safety, and fairness concerns" (Dessler, 2015). Understanding the concepts of human resources is important for all employees as it helps each employee reach their full potential, which ultimately helps the organization to perform better.

Information technology (IT) has played a vital role in many business functions including human resources (Stone and Dulebohn, 2013). Human Resources Information Systems (HRIS) or Human Resources Management Systems (HRMS) are computerized information systems that assist HR professionals with HR-related tasks such as recruitment, selection, performance management, training, and compensation. Understanding the concepts of information technology helps HR professionals to become more productive as they properly use the IT tools to perform their HR functions efficiently and effectively.

This paper presents some ideas and examples of teaching HRMS using Microsoft Dynamics AX in a college classroom. The next section outlines a general approach of teaching the topic and assessing student learning. Ideas and suggestions for classroom activities are provided. The hands-on, in-class activities are described next with the class handout provided in Appendix 1. Homework assignment instructions and questions used to assess student learning are included in Appendix 2. Student learning outcome results from the sample assignment are also included, followed by a discussion and conclusion.

TEACHING HUMAN RESOURCES MANAGEMENT SYSTEMS

At many universities, HRMS is a topic embedded in many courses throughout the business curriculum. Regardless of the discipline, learning about HRMS requires students to have some basic knowledge of business organizations and functions, as well as basic computer skills and information system literacy.

The next step is to introduce the concepts of HRMS in the context related to the course being taught. For example, in the Introduction to Management Information Systems (MIS) course, HRMS is an example of an information system used in a functional area, e.g., HR department (Laudon and Laudon, 2016; Rainer, Prince, and Watson, 2016). In the Human Resource Management course, HRMS is often mentioned as a set of software tools used to support HR functions (Mondy and Martocchio, 2016; Dessler, 2015). In the Enterprise Resource Planning (ERP) course, HRMS is included as one of the major modules in addition to the Accounting/Finance, Sales/Marketing, and

Operations/Supply Chain modules typically found in ERP software (Bradford, 2015; Motiwalla and Thompson, 2012; Monk and Wagner, 2012).

In addition to reading the content from the textbook chapter related to HRMS and attending the lecture on the topic in class, students may be assigned to read other articles in order to broaden the scope of the HRMS and to learn about the latest developments in the field and the industry. Example of such articles include HRIS trends for 2017 (Srivastava, 2017) and How to Select an HRIS. (Society for Human Resource Management, 2015).

Research has shown that hands-on experience with computer software helps solidify the concepts as well as increases student confidence on the subject matter (Chou, 2001; Gist, Schwoerer, & Rosen, 1989). Therefore, students learning about HRMS would greatly benefit from a hands-on approach where they use a HRMS software in a computer lab. The next section describes in-class activities where students have practical experience with HRMS using the Human Resources module in Microsoft Dynamics AX.

USING THE HUMAN RESOURCES MODULE IN MICROSOFT DYNAMICS AX

Microsoft Dynamics AX is an ERP software package from Microsoft. This paper is written based on the Human Resources module from Microsoft Dynamics AX R3. A sample of handout used to guide the in-class activities is provided in Appendix 1 and additional information regarding the Human Resources module in Microsoft Dynamics AX is available at https://technet.microsoft.com/en-us/library/hh242105.aspx.

The in-class demonstration begins with a brief introduction of Microsoft Dynamics AX and the business processes related to Human Resources functions. The definitions of important terms, i.e., department, job, and position are discussed next along with some examples of each. Students then open the Microsoft Dynamics AX program (pre-loaded with the USMF sample data set), navigate to the Human Resources module, and use the Organization menu to view the Position hierarchy of the sample company.

The remaining activities involve the recruitment management functions. The hands-on activities are organized in a series of step-by-step "tasks" with instructions outlined in Appendix 1.

ASSESSING STUDENT LEARNING

Following the in-class demonstration, a homework assignment was used to assess student learning. Example of questions are provided in Appendix 2 with answers available from the author upon request.

The assignment was required by students enrolled in a 15-week ERP Systems class. A total of 13 students, which was the full class enrollment, completed the assignments with an average score of 84.90% and a median score of 90.00%. The assignment was completed outside the class time and took about 2 hours to complete. The direct evidence of student learning outcomes for this assignment are provided in Table 1.

Table 1: Student Learning Outcome Results of HRMS Homework Assignment

Outcomes	% of students received each rating (N=13)				
	>=90%	>=80%	>=70%	>=60%	<60%
1. Define terminology related to Human Resources Management Systems	69.23%	30.77%	0.00%	0.00%	0.00%
2. Use Microsoft Dynamics AX program to locate information within the Human Resources Module	53.85%	0.00%	0.00%	0.00%	46.15%
3. Use Microsoft Dynamics AX program to complete tasks related to human resources functions	53.85%	38.46%	0.00%	0.00%	7.69%

DISCUSSION

The results in Table 1 indicate that students demonstrated the knowledge of terminology related to human resources and were able to use the Microsoft Dynamics AX to locate information in the Human Resources module as well as complete tasks related to human resources functions. However, many students incorrectly located required information (e.g., job functions for the Operations Manager job). Part of it could stem from the limited experience with the software as well as confusing terminology as all but one student in this class were Supply Chain and Information Management majors. Based on these results, additional guidance in the classroom may be necessary to ensure that students clearly understand the concepts and can locate relevant information using the program.

Feedback from students regarding the teaching technique, assignment, and the overall experience with Microsoft Dynamics were very positive. Examples of student feedback included "I found the printable instructions provided a smooth learning process and was a nice way to see key components of [HR] modules. I also found that when I was able to access the ERP system that the textbook chapters began to make a little more sense" and "I really enjoyed the utilization of Microsoft Dynamics in this class. I feel that the class would be only text and theory based if we had not had a live example to use hands on. I think that the only way to use an ERP system is actually performing the tasks and figuring out what the databases are being used for and how they are being referenced."

CONCLUSION

Microsoft Dynamics AX is a powerful and versatile ERP software that not only benefits organizations, but can also be used in the classroom to enhance student learning. The software could be used to demonstrate the HRMS concepts in college-level ERP courses, as well as MIS and HRM courses.

Appendix 1 Handout for In-class Activities

Adapted from Human resources [AX 2012] https://technet.microsoft.com/en-us/library/hh242105.aspx

In Microsoft Dynamics AX, department, job, and position are organizational elements that are maintained within Human Resources.
- A **department** is an operating unit that represents a category or functional area of an organization that is responsible for a specific area of the organization, such as sales, accounting, and human resources.
- A **job** is a collection of tasks and responsibilities that are required of a person who performs a job.
- A **position** is an individual instance of a job.

Explore USMF departments, positions, and jobs

⌖ USMF → Human resources → Common → Organization

⌖ USMF → Human resources → Common → Organization → Positions → Position hierarchy

Recruitment Management
Order of operations in Dynamics AX:
(1) Define a <u>department</u>, (2) create a <u>job</u>, and then (3) create a <u>position</u> (before starting a new recruitment project).

Task 1 Create a new job
⌖ USMF → Human resources → Common → Organization → Jobs

Create a new job with the following information:
- Job: **Asst Mgr - username**
- Description: Assistant Manager
- Title: Assistant Manager
- Job type: Hourly
- Function: 0500 – Administrative Support Workers
- POS permission group: Manager

- Compensation Level: G01 – Grade 01
- Add the following skills with required level of your choice: Microsoft Dynamics AX, Microsoft Excel, and Problem solving.

Task 2 Create a new position
 USMF → Human resources → Common → Organization → Positions → Positions

Instead of creating a new position, we will copy a position # **000212**
- Activation: today
- Retirement: Never
- Copy: Relationships, Labor union, and Payroll
Edit the position detail then view in hierarchy
- Description: **Assistant Manager - username**
- Job: **Asst Mgr - username**
- Reports to position: 000042
- Title: Assistant Manager

Task 3 Create a recruitment project
 USMF → Human resources → Common → Recruitment → Recruitment projects

Create a new Recruitment project with the following information
- Recruitment project: **enter the Position ID created in Task 2**
- Description: Assistant Manager – Position ID
- Recruiter: Sten Faerch (Personnel number 000156)
- Department: Retail Operations
- Job: Asst Mgr - username
- Number of opening: 1
- Open date: today
- Application deadline: default
- Close date: default
Update the Recruitment projects status to **Start**.

Task 4 Enter an applicant
 USMF → Human resources → Common → Recruitment → Applicants

You decided to apply for this job and have to create a new Applicant record.
- Create a new record using your information. Make sure you are listed as an External Candidate.
- Add the following Skills to your record (enter Level date: today's date for all skills)
  - Microsoft Dynamics AX – same Level as what you specified in task 1
  - Microsoft Excel – one Level above what you specified in task 1 (or the same if max)
  - Problem solving – one Level below what you specified in task 1 (or none)

Task 5 Enter an application
On your applicant record, under the New group, click the Application button.
- Select Recruitment project: **Position ID created in Task 2**
- Media: CompanyWeb
- Correspondence action: Received
- Date of receipt: today's date

Appendix 2 Example of HRMS Assignment

Learning objectives: At the end of this assignment, students should be able to
1. Define terminology related to Human Resources Management Systems
2. Use Microsoft Dynamics AX program to locate information within the Human Resources Module

3. Use Microsoft Dynamics AX program to complete tasks related to human resources functions

Instructions: Please answer the following questions using information from the Microsoft Dynamics AX 2012 R3 program with the default USMF data set.

1. Please match each Human Resources term in Microsoft Dynamics AX to its description.

    _____ An individual instance of a job   a. A department
    _____ A collection of tasks and responsibilities   b. A job type
    _____ A classification of a job   c. A position
    _____ An operating unit that represents a category or functional   d. A job
             area of an organization

2. A job function describes high-level functional categories and relates high-level duties. Using information from the Dynamics AX for USMF, what is the job function related to the Operations Manager job?

    a. Operatives   c. Technicians
    b. Professionals   d. Officials and Manager

3. Please create a new position for the Resource Manager job by copying it from the Position number 000279. This position will be activated today and do not set the retirement date. Choose the option to copy Relationships and Payroll. Update the description of this new position to **Resource Manager – username** Enter your new position number in the space provided below.

4. Please create a new recruitment project for this Resource Manager position located in the Operations department. This project should be called **position number - your initial**, e.g., **000549 - rbh**. Enter the description as appropriate. Select Jodi Christiansen as a Recruiter and Claire Kennedy as a Hiring manager. Start the recruitment project then type the **position number - your initial** in the space provided below.

5. Your cousin submitted a resume for a position at USMF (you can make up you cousin's name and other information). From the Applicant list page, please enter his or her name as a new applicant in the Dynamics AX, making sure the Applicant type is listed as External applicant. Enter the highest degree and other applicant information typically found on a resume. Please enter your cousin's Applicant ID in the space provided below.

6. Your cousin is interested in the Resource Manager position. Please add you cousin's application to the **position number - your initial** recruitment project you created for this position in the previous question. Specify Media: Fall Job Fair. Please enter the Application ID in the space provided below.

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