

**PERFORMANCE EVALUATION WEB-BASED APPLICATION
FOR DEPARTMENT OF CHEMICAL ENGINEERING
FACULTY OF ENGINEERING, MAHIDOL UNIVERSITY**

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Thematic Paper
entitled
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ABSTRACT

This research was conducted in order to develop a web-based Performance Evaluation Application (PEA) for the Faculty of Engineering, Mahidol University as a support tool for personnel performance evaluations. The application is divided into 2 parts: (1) the evaluation is based on a performance agreement between the evaluator and the employees and (2) the competency evaluation which assesses capacities, attributes, and competencies of the employees. The results show that the application can assist the executives or supervisors in both annual promotions and personnel development planning in the organization. This application can provide prompt, knowledgeable support services over the Faculty of Engineering's intranet.

The PEA was based on web-based technology and on a relational database model. This application allows users to store and quickly access data.

The PEA consists of several parts such as work evaluation management, performance evaluation management, and reporting results through charts, etc. The system collects the evaluation results for every employee, analyzes, then and reports the results as scores and charts that are easy to understand. A search function is available for the database making it easy to access all the relevant data. This system is also a useful tool for employees themselves in terms of self-development.

KEY WORDS: PERFORMANCE EVALUATION / COMPETENCY /
PERFORMANCE AGREEMENT / DATABASE /
EVALUATION MANAGEMENT

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บทคัดย่อ

การวิจัยนี้มีจุดมุ่งหมายเพื่อวิเคราะห์ ออกแบบ และพัฒนาระบบประเมินผลการปฏิบัติงานของบุคลากร ภาควิชาวิศวกรรมเคมี คณะวิศวกรรมศาสตร์ มหาวิทยาลัยมหิดล เพื่อใช้เป็นเครื่องมือในการสนับสนุนการทำงาน สำหรับช่วยประเมินผลการปฏิบัติงานของบุคลากรโดยแบ่งการประเมินออกเป็น 2 ส่วน คือ การประเมินผลที่มีการตกลงล่วงหน้าระหว่างผู้ประเมินและผู้ถูกประเมิน ที่เรียกว่า Performance Agreement และการประเมินศักยภาพ คุณลักษณะ สมรรถนะของบุคลากร ที่เรียกว่า Competency โดยผลลัพธ์ของข้อมูลนั้นช่วยให้ผู้บริหาร หรือผู้บังคับบัญชาสามารถนำผลการประเมินของบุคลากร มาใช้เป็นแนวทางปรับปรุงแก้ไขบุคลากร วางแผนการพัฒนาบุคลากร และยังสามารถนำมาใช้เป็นส่วนหนึ่งในการพิจารณาประกอบความดีความชอบ หรือให้รางวัลกับบุคลากร ซึ่งระบบจะให้บริการผ่านเครือข่ายอินเทอร์เน็ตของคณะวิศวกรรมศาสตร์

ระบบได้ถูกพัฒนาด้วยเทคโนโลยี Web-based โดยทำงานร่วมกับฐานข้อมูลเชิงสัมพันธ์ ซึ่งระบบสามารถเข้าถึงข้อมูลของผู้ใช้บริการต้องการโดยตรงได้อย่างรวดเร็ว

ระบบประกอบไปด้วยส่วนหลักหลายส่วนด้วยกัน เช่น การจัดการประเมินผลการปฏิบัติงาน การจัดการประเมินสมรรถนะ การแสดงสรุปผลคะแนนการปฏิบัติงานของบุคลากรด้วยแผนภูมิรูปภาพ เป็นต้น ระบบสามารถรวบรวมข้อมูลที่ได้จากประเมินของบุคลากรทั้งหน่วยงานนำมาประมวลผลและแสดงผลลัพธ์ในรูปแบบของผลคะแนนและแผนภูมิรูปภาพ ที่มีความชัดเจนต่อผู้ใช้งาน บุคลากรหรือผู้บริหารสามารถสืบค้นข้อมูลผลการปฏิบัติงานของบุคลากรที่อยู่ในฐานข้อมูลได้ด้วยฟังก์ชันการค้นหา ซึ่งง่ายต่อการเข้าถึงข้อมูล อีกทั้งเป็นเครื่องมือที่ช่วยให้อำนาจนำผลลัพธ์ที่ได้นำไปวางแผนพัฒนาตนเองต่อไป

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CHAPTER I

INTRODUCTION

1.1 Background

The personnel performance evaluation is a process that monitors the performance of each individual in an organization to gain the information that reflects the achievement of the past performance. The result of the evaluation is used as guidance for personnel performance improvement in various positions to better pursue the objectives of the organization. Currently, Mahidol University uses Key Performance Indicators (KPI) to assess performance and competency of personnel to determine the level of the core competency and/or the expected administrative competency.

In this evaluation process, the data and information of personnel performance in the evaluation period must be recorded in several documents. During the process, these documents are transferred back and forth between concerned agencies and individuals. Also, there are rules controlling the data entry into these documents, and these rules cause some problems in filling out the numbers. Since information needs to be calculated and adjusted according to the given ratio, this normally causes some errors in data entry.

According to these reasons, the researcher will use information technology to develop the personnel performance evaluation system for the Department of Chemical Engineering, Faculty of Engineering, Mahidol University, to support the personnel performance evaluation process. To resolve the problems as mentioned above, the system will be developed as a web based application, so the data entry can be carried out from anyplace by authorized personnel without documents being sent back and forth because the data is stored in the central data base that can be accessed from anywhere through web browsers.

1.2 The Problem Description

1.2.1 Performance evaluation and reporting are time consuming task that cause high volume of documents and involve complicated calculations.

1.2.2 Performance reporting is partially redundant and since that same data has to be presented twice to a supervisor for reporting and evaluation purposes.

1.2.3 Performance reporting is difficult for checking and monitoring and is vulnerable to data missing and error.

1.3 Objectives

1.3.1 To study and develop a web-based application for personnel performance evaluation for the Chemical Engineering Department, Faculty of Engineering, Mahidol University.

1.3.2 To create summary report and compare the result of the performance evaluation.

1.4 Scope

1.4.1 A web-based application for personnel performance evaluation for the Chemical Engineering Department, Faculty of Engineering, Mahidol University.

1.4.2 A summary of performance will be presented in a report form.

1.4.3 Standards and criteria in this system are used to evaluate personnel of the Chemical Engineering Department, Faculty of Engineering, Mahidol University.

1.5 Expected Results

1.5.1 To support the personnel performance evaluation for the Chemical Engineering Department, Faculty of Engineering.

1.5.2 To facilitate executives or supervisors in the personnel performance evaluation rewarding processes.

1.5.3 To help supervisors in personnel development planning process to increase personnel competency according the organization requirement.

1.5.4 To decrease data error and increase data reliability.

CHAPTER II

LITERATURE REVIEW

This chapter involves the literature reviews on planning, technology, and related research. This chapter is classified as following:

- 2.1 Conceptual of Performance Management
- 2.2 Conceptual of Performance Appraisal
- 2.3 Performance Evaluation of Mahidol University
- 2.4 Definitions of KPI
- 2.5 Definitions of Competency
- 2.6 Related research

2.1 Conceptual of Performance Management

2.1.1 Definition of Performance Management

Performance Management is a system and process that links the organization's goals and strategies to individual and team performance so as to increase organizational effectiveness.

It is a joint process that involves both the line manager and the employee who identify common goals/objectives, which correlate to the higher goals of the organization. This process results in the establishment of written performance expectations; later used as measures for feedback and performance appraisal (the latter is also known as performance review, assessment or evaluation).

Performance Management is about providing direction, clarity and support to the work that employees do so as to optimize their effectiveness and efficiency in line with the needs of the organization. It focuses both on objectives (the

'what') and on style and behaviors (the 'how'), so that it is possible to assess not only whether employees are achieving their individual objectives that have been set, but also whether their performance is in line with the organization's preferred values and culture, e.g. teamwork, customer focus, interpersonal relationships, participative management style, etc. (doing the RIGHT THINGS in the RIGHT WAY).

The model below illustrates the four stages of Performance Management:



Figure 2.1: Performance Management Model

This model is aligned with the WORK NEEDS of individual employees, which are as follows:

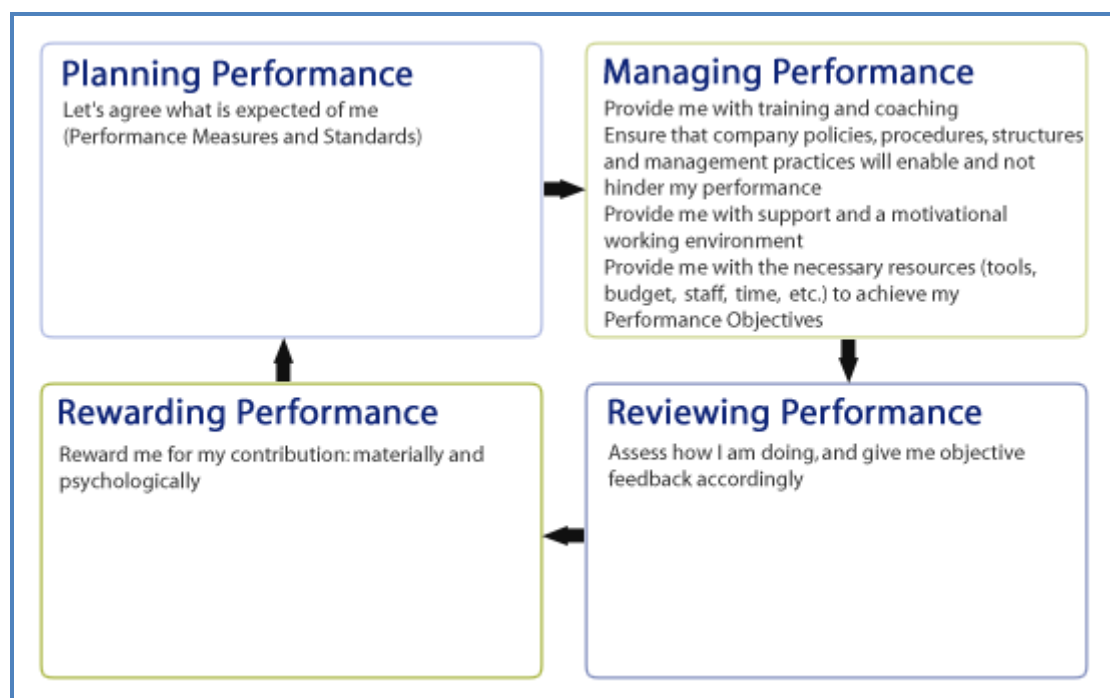


Figure 2.2: The WORK NEEDS of individual employees.

To provide for the above needs of an employee, let's consider what should happen at each stage of the Performance Management Cycle:

2.1.1.1 Planning Performance: Performance objectives for individual employees (at all levels) are jointly discussed and agreed during one-on-one, face-to-face meetings between jobholders and their immediate line managers - normally for a period of 12 months. (Similarly, objectives could be set for whole work teams, provided that the team members are totally interdependent, working towards achieving the same goal/output, i.e. each team member contributes a portion towards it).

2.1.1.2 Managing Performance: During this stage job holders implement/ execute the agreed objectives. They manage their own performance, assisted by their line managers who should remove performance obstacles in the work environment and provide the necessary resources, training and coaching. Line managers are also responsible for integrating and coordinating (horizontally and vertically) the objectives of all their employees/units/teams, monitoring and controlling their performance, taking corrective action, and doing joint problem solving as and when necessary. The leadership, feedback, reinforcement and support they need to provide them with throughout, are of utmost importance.

Managing Performance is an ongoing, 12 months' activity that actually runs through all the phases of the Performance Management Cycle. It is the golden thread of Performance Management.

2.1.1.3 Reviewing Performance: Times for formal Performance Reviews/ Appraisals are decided by top management. Generally, 4 or 6-monthly formal performance appraisals are sufficient. During these sessions, jobholders and their direct line managers discuss (and assess) how well the agreed objectives have been achieved. Problem areas are identified and corrective measures planned, including possible training that the jobholder needs.

2.1.1.4 Rewarding Performance: The actual rating of performance (how well each objective had been achieved) forms part of the Performance Review sessions. Rewarding people for good performance takes the form of monetary rewards (performance-related pay such as bonuses and/or salary

adjustments). However, the power of non-monetary rewards, such as praise and recognition, should not be ignored and needs to enjoy much more emphases than it generally does.

In practice, Planning Performance and Reviewing Performance can take place during one session, called the Performance Interview.

2.1.2 The Employee Performance Appraisal/Review Interview

consists of two stages:

2.1.2.1 Reviewing Performance: A "backwards" look at how well previously set objectives were achieved, and the factors that affected their achievement.

2.1.2.2 Planning Performance: A "forwards" look at new objectives to be achieved during the next performance period.



Figure 2.3: Stages Performance Appraisal/Review

In the following sections we will investigate how each of the four stages of Performance Management is handled, starting with the Planning of Performance.

It is important to note that Performance Management is not an additional responsibility of managers. Rather, it should be seen as an effective WAY of managing. In fact, managing employee performance is the essence of a manager's job, along with business planning, controlling the budget, and managing the production or client service process.

2.1.3 The Most Important Objectives of Performance Management

Are:

2.1.3.1 To serve as a vehicle for implementing organizational goals and strategies

2.1.3.2 To facilitate continuous performance improvement, organization development and culture change

2.1.3.3 To achieve quality and efficiency, i.e. to meet the customer's needs as precisely, quickly and cheaply as possible

2.1.3.4 To ensure clarity regarding work expectations and standards, reducing resource wastage and conflict

2.1.3.5 To continually enhance employee competence through the identification of output-related training and development needs and strategies

2.1.3.6 To facilitate performance-based remuneration and rewards

2.1.3.7 To serve as a legal basis in addressing persistent poor performance

2.1.4 Benefits Of Performance Management

2.1.4.1 Benefits to the Organization

- Facilitates the achievement of corporate goals and strategies
- Facilitates the management of change
- Leads to continuous improvement of performance, systems, processes, structures, and management practices
- Leads to improved productivity and work standards
- Provides a basis for enhanced teamwork
- Limits resource wastage

- Ensures optimal utilization of personnel
- Helps build a climate of openness and trust
- Creates a participative work culture
- Establishes a performance culture - of quality, efficiency

and achievement

• Provides useful information for Human Resources decisions
(Training and Development, HR & Succession Planning, Career Management)

- Leads to a competent workforce
- Serves as a legal basis to address persistent poor

performance

- Provides the basis for fair remuneration based on actual

performance

2.1.4.2 Benefits to Employees

- Ensures clarity regarding work expectations and standards
- Provides a clear basis/yardstick for discussing performance

in a fair way

- Energizes and motivates; enhances job satisfaction
- Is a tool for assessing employees' competence (or lack

thereof), leading to targeted training and development; helping them to realize their full potential

- Facilitates career development
- Provides a basis for improved relationships with line

managers and coworkers

- Facilitates regular feedback on performance
- Provides a forum to share new ideas and to air views

2.1.5 The difference between Goals and Objectives

Goals comprise broad statements of desired conditions or outcomes, normally set by organizations or business units during strategic planning (e.g.: "To increase market share by 20%").

Objectives, on the other hand, are statements of specific results to be achieved by teams or individual employees to accomplish a goal, and are measured quantitatively or qualitatively (e.g.: "To achieve average sales of \$300 000 per month from 1 June 2004).

2.1.5.1 Why set Objectives?

The setting of objectives effect performance in at least three ways:

- When employees are given specific objectives, they tend to perform better than when they are told to do their best, or when they receive no guidance at all
- Specific objectives reduce uncertainty about what is expected, and focus behavior in the direction of the objectives rather than elsewhere
- Objectives energize behavior, motivating people to put in extra effort, to live up to the challenge of achieving them

2.1.5.2 Setting Objectives and Standards: A Participative, Collaborative Process

Objective setting should be a face-to-face, participative and collaborative process between employees and their line managers at all levels in the organization. Collaboration will:

- Add to the quality of the decisions being made
- Increase an employee's motivation and commitment to achieve the agreed objectives
- Effect the employee's believe that the objectives are achievable
- Ensure more realistic objectives as employees normally know best what they are capable of achieving, and what resources will be needed

Mutual agreement regarding objectives and performance standards is the ideal (and preferable), but not always possible. In the end, line managers will have the final say in this as long as they are reasonable in their expectations.

Some cascaded objectives may also be in the form of directives from above, and therefore not negotiable, but, at the very least, there should be mutual understanding, acceptance and buy-in

In the collaborative process of developing performance standards for a continuous (routine) objective or function, involve all of those employees whose work will be evaluated according to those standards. For the sake of fairness and consistency, also consider collaborating with other units in your organization or department if employees reporting to different line managers perform the same tasks or functions.

2.1.5.3 Operational Sources for Objectives

In the previous section it was discussed how corporate goals need to be cascaded all the way down the organization to the point where objectives for individual employees (or teams) are agreed. This is an important "strategic" source for individual objectives. But it is not as if we have to wait every year for this cascading process to reach individuals - this might take months!

There are many other "operational" sources for objectives that pressurize us continually - things that demand our attention and action throughout the year, such as:

- Existing team/unit operational objectives
- Job/Role Descriptions
- Previous performance appraisals
- New products and services
- New technology
- Anticipated market conditions
- Currently available performance data, e.g. sales statistics, production reports, customer feedback
- Competitor moves
- Other threats, opportunities and crises posing themselves continuously

2.1.6 Formulating Performance Measures

Performance Measures are any of the following:

- Goals/Objectives
- Key Performance Indicators (KPI's)
- Competencies

Performance Measures need to be mutually agreed between line managers and jobholders, and documented onto a Performance Agreement Form, which serves as a written "contract" between them regarding WHAT needs to be done by the jobholder and to what STANDARD (Quantitatively and Qualitatively).

There should be anything from 5 to 15 Performance Measures per position, consisting of 3 to 6 critical Competencies, with the balance comprising of Goals/Objectives and KPI's.

Before attempting the above process, it would be a good idea to first develop a Job/Role Description for the position through a thorough Job Analysis, as a Job/Role Description will function as a major resource to derive Performance Objectives from.

STEP 1: SETTING KEY PERFORMANCE AREAS

KPA's are areas of accountability for which an employee is expected to produce results. (They are identical to the KPA's as would appear in the Job/Role Description for the position.)

All jobs should have anything up to a maximum of seven KPA's which, if viewed, will tell you broadly WHAT the JOB ENTAILS (similar to "Job Functions" in the old language).

KPA's should meet the following criteria:

- They (or their combination) should be unique to the specific position
- They should provide clear justification for the existence of the position
- They must be within the authority level of the jobholder
- They must be worded briefly (1-3 words)
- Their number must be limited (not more than 7), focusing on the most important job outputs
- Gives the answer to the question: "Where does a cluster of related job activities lead to?"

Examples of KPA's:

- Office Administration
- Equipment Maintenance
- System Security
- Loss Control
- Customer Support/Service
- Account Management
- Sales
- Marketing
- Advertising
- Purchasing
- Network Operations
- Network Installation
- Self-Development

Add for line managers:

- HR Management
- Strategic Management
- Financial Management
- Operational Planning, Organizing and Control

STEP 2: SETTING PERFORMANCE OBJECTIVES (PO's)

The KPA's are next "broken up" into specific Performance Objectives (PO's).

A Performance Objective (also just referred to as an objective) is a short, concise description of measurable output/outcome that will contribute to the attainment of performance in a KPA.

Format Of Objectives : Objectives need to be put in OUTCOME terms, i.e. WHAT SPECIFICALLY Should Be ACHIEVED - A measurable and specific identifiable product or service that an internal or external customer wants.

This is necessary as the methods (steps) used in achieving a particular objective, often vary, and should therefore not be prescribed. Prescribing in detail

how a specific task should be done will relegate an employee to the level of a robot, taking away his initiative and individuality.

Objectives consist of two elements: An Action Verb, and a Noun or Object. Some objectives become even clearer when the Purpose of the action is also added.

Let's look at some examples of objectives:

ACTION VERB + NOUN/OBJECT (plus PURPOSE if necessary)

- Conduct a client survey to establish their changed needs
- Research and implement an employee suggestion scheme
- Develop a computerized financial system to replace the present manual version
- Launch a marketing campaign to promote our 'Y' service
- Increase sales of product 'Z'
- Ensure appropriate stock levels

2.1.7 Smart Goals/Objectives

The acronym SMART is a commonly used guide to constructing a good goal or objective. The letters stand for the following words:

- Specific
- Measurable
- Aggressive yet achievable
- Realistic
- Time-related

2.2 Conceptual of Performance Appraisal

2.2.1 Basic Purposes of Performance Appraisal

Effective performance appraisal systems contain two basic systems operating in conjunction: an *evaluation system* and a *feedback system*.

The main aim of the evaluation system is to identify the *performance gap* (if any). This gap is the shortfall that occurs when performance does not meet the standard set by the organization as acceptable.

The main aim of the feedback system is to inform the employee about the quality of his or her performance. (However, the information flow is not exclusively one way. The appraisers also receives feedback from the employee about job problems, etc.)

One of the best ways to appreciate the purposes of performance appraisal is to look at it from the different viewpoints of the main stakeholders: the employee and the organization.

2.2.1.1 Employee Viewpoint

From the employee viewpoint, the purpose of performance appraisal is four-fold:

- (1) Tell me what you want me to do
- (2) Tell me how well I have done it
- (3) Help me improve my performance
- (4) Reward me for doing well.

2.2.1.2 Organizational Viewpoint

From the organization's viewpoint, one of the most important reasons for having a system of performance appraisal is to establish and uphold the *principle of accountability*.

For decades it has been known to researchers that one of the chief causes of organizational failure is "non-alignment of responsibility and accountability." Non-alignment occurs where employees are given responsibilities and duties, but are not held accountable for the way in which those responsibilities and duties are performed. What typically happens is that several individuals or work units appear to have overlapping roles.

The overlap allows - indeed actively encourages - each individual or business unit to "pass the buck" to the others. Ultimately, in the severely non-aligned system, no one is accountable for anything. In this event, the principle of accountability breaks down completely. Organizational failure is the only possible outcome.

In cases where the non-alignment is not so severe, the organization may continue to function, albeit inefficiently. Like a poorly made or badly tuned engine, the non-aligned organization may run, but it will be sluggish, costly and unreliable. One of the principal aims of performance appraisal is to make people accountable. The objective is to align responsibility and accountability at every organizational level.

2.2.2 Benefits of Appraisal

Perhaps the most significant benefit of appraisal is that, in the rush and bustle of daily working life, it offers a rare chance for a supervisor and subordinate to have "time out" for a one-on-one discussion of important work issues that might not otherwise be addressed.

Almost universally, where performance appraisal is conducted properly, both supervisors and subordinates have reported the experience as beneficial and positive.

Appraisal offers a valuable opportunity to focus on work activities and goals, to identify and correct existing problems, and to encourage better future performance. Thus the performance of the whole organization is enhanced.

For many employees, an "official" appraisal interview may be the only time they get to have exclusive, uninterrupted access to their supervisor. Said one employee of a large organization after his first formal performance appraisal, "In twenty years of work, that's the first time anyone has ever bothered to sit down and tell me how I'm doing."

The value of this intense and purposeful interaction between a supervisors and subordinate should not be underestimated.

2.2.2.1 Motivation and Satisfaction

Performance appraisal can have a profound effect on levels of employee motivation and satisfaction - for better as well as for worse.

Performance appraisal provides employees with recognition for their work efforts. The power of social recognition as an incentive has been long noted. In fact, there is evidence that human beings will even prefer negative recognition in preference to no recognition at all.

If nothing else, the existence of an appraisal program indicates to an employee that the organization is genuinely interested in their individual performance and development. This alone can have a positive influence on the individual's sense of worth, commitment and belonging.

The strength and prevalence of this natural human desire for individual recognition should not be overlooked. Absenteeism and turnover rates in some organizations might be greatly reduced if more attention were paid to it. Regular performance appraisal, at least, is a good start.

2.2.2.2 Training and Development

Performance appraisal offers an excellent opportunity - perhaps the best that will ever occur - for a supervisor and subordinate to recognize and agree upon individual training and development needs.

During the discussion of an employee's work performance, the presence or absence of work skills can become very obvious - even to those who habitually reject the idea of training for *them*!

Performance appraisal can make the need for training more pressing and relevant by linking it clearly to performance outcomes and future career aspirations.

From the point of view of the organization as a whole, consolidated appraisal data can form a picture of the overall demand for training. This data may be analyzed by variables such as sex, department, etc. In this respect, performance appraisal can provide a regular and efficient training needs audit for the entire organization.

2.2.2.3 Recruitment and Induction

Appraisal data can be used to monitor the success of the organization's recruitment and induction practices. For example, how well are the employees performing who were hired in the past two years?

Appraisal data can also be used to monitor the effectiveness of changes in recruitment strategies. By following the yearly data related to new hires (and given sufficient numbers on which to base the analysis) it is possible to assess whether the general quality of the workforce is improving, staying steady, or declining.

2.2.2.4 Employee Evaluation

Though often understated or even denied, evaluation is a legitimate and major objective of performance appraisal.

But the need to evaluate (i.e., to judge) is also an ongoing source of tension, since evaluative and developmental priorities appear to frequently clash. Yet at its most basic level, performance appraisal is the process of examining and evaluating the performance of an individual.

Though organizations have a clear right - some would say a duty - to conduct such evaluations of performance, many still recoil from the idea. To them, the explicit process of judgment can be dehumanizing and demoralizing and a source of anxiety and distress to employees.

It is been said by some that appraisal cannot serve the needs of evaluation and development at the same time; it must be one or the other.

But there may be an acceptable middle ground, where the need to evaluate employees objectively, and the need to encourage and develop them, can be balanced.

2.3 Performance Evaluation of Mahidol University

Performance Evaluation is a constructive process to acknowledge the performance of an employee. An employee's evaluation shall be sufficiently specific to inform and guide the employee in the performance of his/her duties. Performance evaluation is not in and of itself a disciplinary procedure.

2.3.1 The importance of Performance evaluation

Ph.D. Prasit Wattanapa (2008) The importance of Performance evaluation.

Performance evaluation, directly to achieving the vision and mission or achievements of the organization.

2.3.1.1 Evaluation system that has an agreement in advance of events. Indicators to assess and the criteria through by the assessor and be assessor can be jointly determined.

2.3.1.2 Evaluation system that various agreements must be consistent with job description of the job and consistent with the mission of the agency / organization.

2.3.2 Purpose of Performance evaluation

2.3.2.1 Development employee to perform their duties consistent with the vision and mission of agencies / organizations.

2.3.2.2 Organizations to reward employee appropriately and fairly.

2.3.2.3 Bring result the evaluation to the Human Resources Planning.

2.3.2.4 Seek the appropriate to prepare succession plan process.

2.3.3 Guidelines for Performance evaluation

2.3.3.1 Bring the Performance Evaluation that agreed in advance. Between The assessor and be assessor are called the *Performance Agreement* to be used by the Knowledge management methods to determine the path of such an agreement.

2.3.3.2 Performance Evaluation comprehensive evaluation of the implementation and evaluation of performance characteristics (Competency)

2.3.4 Benefits of Performance evaluation

2.3.4.1 Executives or supervisors can review the performance characteristics of subordinates. Including the allocation of work allocated. So that the performance of personnel and agencies in line with the mission of the agency / organization.

2.3.4.2 The agreement evaluated before evaluation. The agreement is acceptable and who are assessor and be assessor. Including terms as perceived by employee in an organization. Resulted in the recognition and build in justice agencies.

2.3.4.3 Executives or supervisors can use to make assessments in terms of planning employee. Including the creation of new jobs or quality increase in the unit.

2.3.4.4 In the case of subordinate workers 2 position (Dual Position) agreement processing will enable assessment work to allocate the right to work and greater accuracy in evaluating performance.

Benefits is indirect

2.3.4.5 Creating opportunities for communication between supervisors and subordinates.

2.3.4.6 Evaluation supervisor levels in the leadership Character (Leadership) when assigned dealing with subordinates. (For the purpose of Succession Plan in the future).

2.3.5 Performance evaluation process.

2.3.5.1 The assessor and be assessor with an agreement from the performance evaluation before the evaluation cycle.

2.3.5.2 When passed from processing operations. The assessor and be assessor are Co-perception assessment together. Joint planning and development / training, when an assessment should be developed

2.3.5.3 The assessor determine the performance agreement next round with be assessed. Should cover the points that should be developed.

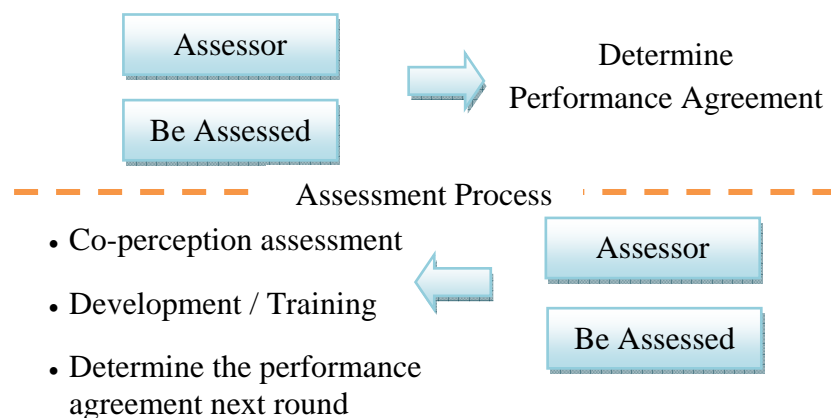


Figure 2.4: Assessment Process

2.3.6 How to evaluate performance.

Performance evaluation by a Performance Agreement of Mahidol University. Will be evaluated 2 times a year.

- The first evaluation of the performance since 1 September – 28, 29 February.
- The second evaluation of the performance since 1 March to 31 August.

Each round employees will agree to performance together with supervisors from the beginning of round and will evaluate the work done by comparison with the actual goal is reached. To summarize the points assessment at the end of round. In the Past if important changes such as more work from those agreed upon at the beginning cycle assessment of performance may be considered in conjunction with supervisors to improve what was agreed beginning. The improve will be used to evaluate at the end of cycle assessment.

Performance evaluation will consider 2 parts.

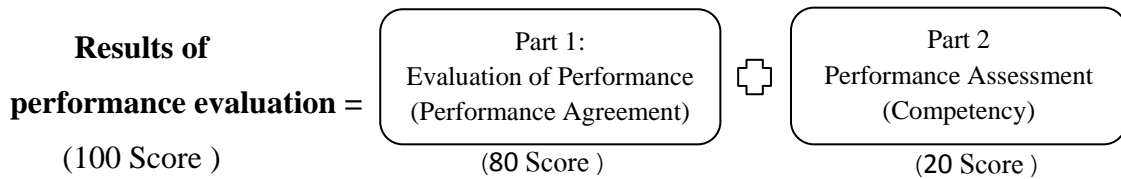
Part 1: Evaluation of Performance (Performance Agreement) with the main index measurement (KPI: Key Performance Indicators).

Considering the efficiency and effectiveness of work objectives and operational goals that workers have agreed with supervisors as to their own and the action plan which identified it as objective.

Part 2 Performance Assessment (Competency) Consider the level of core competency in operations or management that importance of working to achieve. Divided into 5 Competencies:

1. Integrity
2. Achievement Motivation
3. Responsibility
4. Teamwork
5. Systematic Job Planning

The results of performance evaluation. Each section will be thinking differently is Part 1 Evaluation of Performance (Performance Agreement) used to think 80 percent, Part 2 evaluated competency (Competency) used to think 20 percent the equation below.



2.4 Definitions of KPI

Key Performance Indicators are quantifiable measurements, agreed to beforehand, that reflect the critical success factors of an organization. They will differ depending on the organization. A business may have as one of its Key Performance Indicators the percentage of its income that comes from return customers. A school may focus its Key Performance Indicators on graduation rates of its students. A Customer Service Department may have as one of its Key Performance Indicators, in line with overall company KPIs, percentage of customer calls answered in the first minute. A Key Performance Indicator for a social service organization might be number of clients assisted during the year.

Whatever Key Performance Indicators are selected, they must reflect the organization's goals, they must be key to its success, and they must be quantifiable (measurable). Key Performance Indicators usually are long-term considerations. The definition of what they are and how they are measured do not change often. The goals for a particular Key Performance Indicator may change as the organization's goals change, or as it gets closer to achieving a goal.

2.4.1 Key Performance Indicators Reflect the Organizational Goals

An organization that has as one of its goals "to be the most profitable company in our industry" will have Key Performance Indicators that measure profit and related fiscal measures. "Pre-tax Profit" and "Shareholder Equity" will be among them. However, "Percent of Profit Contributed to Community Causes" probably will not be one of its Key Performance Indicators. On the other hand, a school is not concerned with making a profit, so its Key Performance Indicators will be different. KPIs like "Graduation Rate" and "Success in Finding Employment after Graduation", though different, accurately reflect the schools mission and goals.

2.4.2 Key Performance Indicators Must Be Quantifiable

If a Key Performance Indicator is going to be of any value, there must be a way to accurately define and measure it. "Generate More Repeat Customers" is useless as a KPI without some way to distinguish between new and repeat customers. "Be The Most Popular Company" won't work as a KPI because there is no way to measure the company's popularity or compare it to others.

It is also important to define the Key Performance Indicators and stay with the same definition from year to year. For a KPI of "Increase Sales", you need to address considerations like whether to measure by units sold or by dollar value of sales. Will returns be deducted from sales in the month of the sale or the month of the return? Will sales be recorded for the KPI at list price or at the actual sales price?

You also need to set targets for each Key Performance Indicator. A company goal to be the employer of choice might include a KPI of "Turnover Rate". After the Key Performance Indicator has been defined as "the number of voluntary resignations and terminations for performance, divided by the total number of employees at the beginning of the period" and a way to measure it has been set up by collecting the information in an HRIS, the target has to be established. "Reduce turnover by five percent per year" is a clear target that everyone will understand and be able to take specific action to accomplish.

2.4.3 Key Performance Indicators Must be Key To Organizational Success

Many things are measurable. That does not make them key to the organization's success. In selecting Key Performance Indicators, it is critical to limit them to those factors that are essential to the organization reaching its goals. It is also important to keep the number of Key Performance Indicators small just to keep everyone's attention focused on achieving the same KPIs.

That is not to say, for instance, that a company will have only three or four total KPIs in total. Rather there will be three or four Key Performance Indicators for the company and all the units within it will have three, four, or five KPIs that support the overall company goals and can be "rolled up" into them.

If a company Key Performance Indicator is "Increased Customer Satisfaction", that KPI will be focused differently in different departments. The Manufacturing Department may have a KPI of "Number of Units Rejected by Quality Inspection", while the Sales Department has a KPI of "Minutes a Customer Is on Hold before a Sales Rep Answers". Success by the Sales and Manufacturing Departments in meeting their respective departmental Key Performance Indicators will help the company meet its overall KPI.

2.5 Definitions of Competency

2.5.1 What is Competency Profiling?

Competency Profiling is typically a method for identifying specified skills, knowledge, attitudes and behavior necessary to fulfilling a task, activity or career. In most commercial organizations its ultimate purpose is to provide value to the external customer.

In categorizing competence, some organizations make distinctions between competencies, which refer to desired personal attributes and behaviors and competences, which are the knowledge and skill required to bring about improved performance.

Over the last ten years, particularly within service industries utilizing call and contact centre it has been reported that recruiting staff on the basis of their competencies has become mainstream practice. 'If you get the right person it's easy to give them the skills'. Our experience at dancing lion suggests that making an assessment regarding how well the personal attributes of a potential employee match the requirements of a role has been central to many recruitment processes for much longer than that. Perhaps, the difference is that the processes have become more formalized, although many seasoned recruitment professionals still rely on an intuitive evaluation when interviewing and assessing new people. Attitudes, beliefs and values are more difficult to assess and can often be below the surface of conscious awareness of the candidate. They therefore require greater skills in elicitation and increasing sophisticated techniques and tools. Every organization is different and so each develops a competency framework appropriate for their needs.

The competencies and preferences of HR professionals who design the framework play a major part in the selection of the approach and methods. These can include tools and techniques such as: assessment centre, behavioral event interviewing, repertory grids and psychometric testing. Assessment of competencies is complex and reliance on any one method is likely to result in a bias. The best results are often achieved through triangulating a number of different techniques. Different disciplines and contexts generate different understandings leading to the range of definitions available.

2.5.2 Levels of competence

Much used in technical and further education fields most practitioners argue it is imperative to separate out the levels of competency to provide meaningful assessment. For example levels can include:

- practical competence: the demonstrated ability to perform a set of tasks
- foundational competence: demonstrated understanding of the what and why to carrying out the tasks
- reflexive competence: the ability to integrate actions with an understanding of action so that learning occurs and changes are made when necessary, and
- applied competence: the demonstrated ability to perform a set of tasks with understanding and reflexivity.

For many commercial organizations these terms are too formal to be commonly used by staff so they are adapted to increase likelihood of acceptance. For example, a more user friendly grading scale might involve:

- Novice: a basic level of understanding but employee has not performed task before.
- Apprentice: employee has performed task with help or has understanding and limited practical experience.
- Competent: employee has depth of understanding and consistently performs task to required standard.

- Expert: consistently performs task to the required standard and looks at ways of improving ways of working, has in-depth understanding and could train others.

In using this type of scale it is also necessary to consider the importance of the task to the business and weight it accordingly.

2.5.3 Why is competency profiling necessary?

For most organizations, it is necessary to ensure that its business outcomes are achieved. If standards and the means to achieving them are not well defined the organization is unable to deliver products and services to customers to quality, deadline and price. As a commercial concern the business soon becomes economically unviable.

For existing staff, knowing specifically what skills, knowledge, attitudes and behavior their employers seek enables them assess their ability to provide them. This gives them an opportunity to appreciate their own strengths and recognize development areas. Being aware of areas where they could improve enables them to consider and plan how to address gaps.

All organizations have periods of expansion, consolidation and renewal, during which it's necessary to recruit new members or carry out succession planning. These activities are not possible unless competencies have been defined.

2.5.4 How is it used?

Once the organization has identified its business objectives and defined their processes to deliver to customer requirements, they then have to define the time, cost and quality standards of each task. The competencies are then identified for each task in the key areas of skill, knowledge, attitude and behavior. It is essential to have documented sensory specific, behavioral evidence of a competence having been achieved. Once defined, this framework provides the infrastructure for the approach to be rolled out throughout the organization.

2.5.5 Part of a Performance Management System

It is well known that whatever an organization measures is regarded as important by staff. Correspondingly, the degree of importance given to an objective largely determines whether it's achieved or not.

For a competency framework to be effective it needs to be used by line managers and staff within a performance management system. Performance management is the continuous process of developing both competencies and competences to improve individual, group, and organizational performance. It involves agreeing objectives, targets and standards of performance with all individuals and then supporting staff to achieve them through monitoring and development. Regular performance reviews and personal development plans are required if the process is to succeed.

2.6 Related research

Kwanruthai Kunkitcharoen (2005), Performance evaluations are very important in personnel management because the results will show the potential and capability of each employee. In addition, they reflect how the executive officers set plans, manage resources, and solve problems. CEOs or other executives may use the performance evaluations as a guideline to help them improve organization productivities and plan for the future. To evaluate all the employees' productivities, there is a lot of paper work that needs to be completed. Much of it is redundant, time consuming to gather and difficult to analyze. Therefore this project was established to solve there problems. Two personnel systems, a personnel database system and an employee operational system, are linked together to reduce data redundancy and provide data accuracy. The project will evaluate performance evaluations automatically, analyze data, and create reports and graphs for each group of employees; examples of these groups would include, staff, head of department/sector, and director. Since the Computer Center launched this project, the performance evaluation process has become more useful than in the past. The project has helped the executives to make more appropriate decisions and to make more efficient use of their time. Ease of use and high security access are two key features of the system.

These systems may have additional applications which would result in the more efficient use of this resource.

Pornthep Rupan(2003), A Development Of The Performance Appraisal System Of The Basic Education Institutes Committee. The objective of this study was to develop the performance appraisal system of the Basic Education Institute Committee. Research procedures consisted of 6 steps: system analysis, system synthesis, system design, system verification, system improvement and system implementation.

The research results could be concluded as follow:

1. The model of the performance appraisal system of the Basic Education Institute Committee consisted of 4 basic dimensions: inputs, process, outputs and feedback.
2. The inputs dimension consisted of appraisal objective, performance indicators and criteria, appraisal instruments, appraisers and appraisees.
3. The process dimension consisted of performance appraisal planning, constructing and developing the appraisal instruments, collecting the performance data, analysis and evaluation the performance by comparison with the appraisal criteria.
4. The outputs dimension consisted of recording the results of performance appraisal of the Basic Education Institute Committee as a whole.
5. The feedback dimension consisted of feedback for the Basic Education Institute Committee and feedback for the Education Service Area Office.
6. The results from system implementation indicated that the components of the system had propriety at high level and the performance appraisal results, received from the system, met the evaluative standards composed of utility standard, feasibility standard, propriety standard and accuracy standard at high level.

Supachai Kanchanapokin 2003, This project brings information technology to ease and improve process of performance reporting and monitoring for management level of National Science and Technology Development Agency (NSTDA) and its business units: National Center for Genetic Engineering and

Biotechnology (BIOTEC), National Center for Metal and Material Technology (MTEC), National Center of Electronics and Computer Technology (NECTEC) and Central Office of NSTDA. The information system built in this project was developed using Active Server Page (ASP) Technology, which would help NSTDA to enable the Performance Based Budgeting (PBB) of NSTDA through management concepts of Balanced Scorecard approach developed by US Foundation for Performance Measurement.

As a result, this independent study provides Performance Monitoring and Reporting System (PMRS), the prototype information system that visualizes a new way of management techniques to enabling management policies guided by Thai government. The PMRS is not only help executives to quickly access to NSTDA's departmental operation results and performance with a unique standard reporting scheme, but also minimize resources and efforts that employees had used to develop result reports by collecting operation results directly from operation staffs through organization intranet.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Steps and Research Methodology

This chapter describes materials and method used in this research. The materials are both hardware and software using this research. Step of work in this study base on the System Development Life Cycle (SDLC) to develop the system and illustrated the developing steps.

3.1.1 Data and Information Gathering

Collect data and Information of existing system to analyze and design the system by

- Interview the staff in all level (staff and project administrator) to define problem and find user requirement.
- Review about relevant theories and research for the knowledge of Performance Evaluation Study software programs and tools which are used to develop the web based Performance Evaluation System
- Gather all activities (document, project, etc.) from the Department of Chemical Engineering Faculty of Engineering, Mahidol University.

3.1.2 Requirements Analysis

All data and information that made understanding problem and defining user requirement are analyzed to indentify new system specification

3.1.3 System Analysis and Design

After completion of requirement analysis, the next phase is system analysis and design.

- **System Analysis Phase**

In the system analysis phase, involved the identification of requirements and features of new system

The aim of this phase is to analyze and defines system to be built. Attributes, table and relationship of table will be define, then Data Flow Diagram, which comprise a structural technique to chart graphically the input, process and output of the system, will be created. The E-R diagram that used to represent the conceptual design of database systems are also to identified relationships of tables.

- **System Design Phase**

Database designs bases on relational model of the data contained in tables. The structure of the database is determined during this step, database design provides a data model that supports any transaction require on the data, Primary keys are identified for each table and relationship between table will be identified either. After the design, the database will be normalized.

User Interface design requires understanding of human factor and interface technology. Input and Output screens. Which communicated with users, will be designed.

3.1.3.1 E-R Diagram

E-R Diagram can be created during analysis phrase. Performance Evaluation System for the Department of Chemical Engineering Faculty of Engineering, Mahidol University try to design in relational database that shown in Figure 3.1

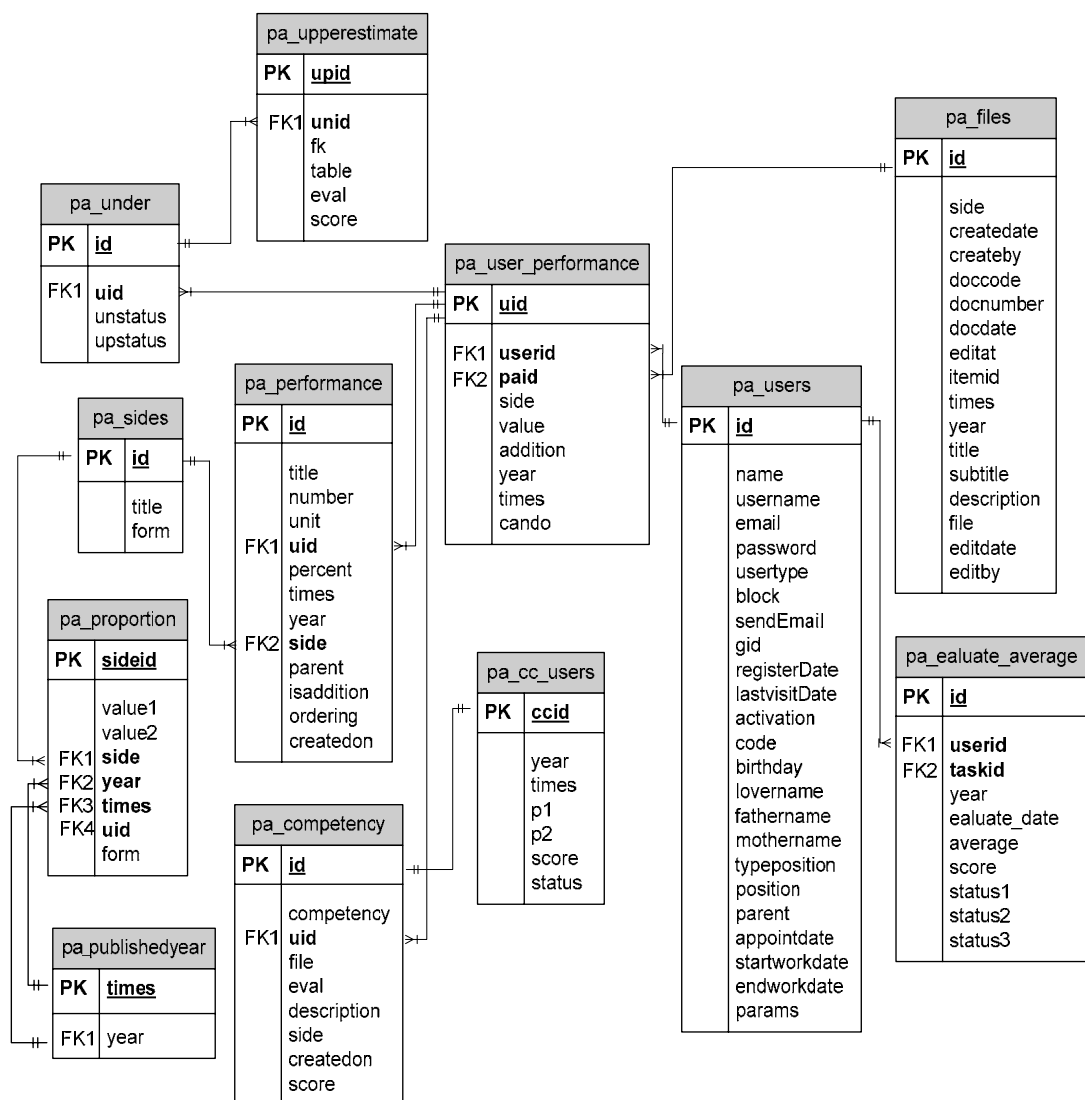


Figure 3.1: An Entity-Relationship (E-R) Diagram of system

3.1.3.2 Data Flow Diagram

The data flow diagram of the Performance Evaluation System for the Department of Chemical Engineering Faculty of Engineering, Mahidol University has been studied and analyzed data as follow:

Context Diagram

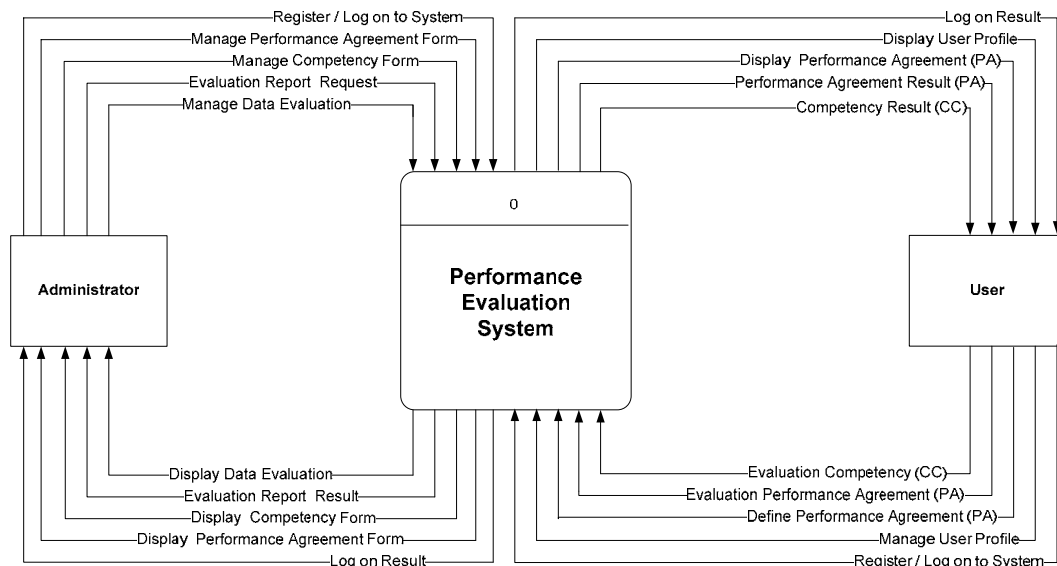


Figure 3.2: Context Diagram of Performance Evaluation System

- The administrator login to the system with the username and password. The system will be verified the authorization to be access the system.
- The administrators manage Performance Agreement form to the system.
- The administrator creates Performance Agreement forms and Competency forms.
- The user login to the system with the username and password. The system will be verified the authorization to be access the system.
- The user manages user profile.
- The user define Performance Agreement criteria and performance proportion .
- The user evaluation to Performance Agreement process and Competency process.
- The user request for report.
- The system displayed report.

Data Flow Diagram Level 0

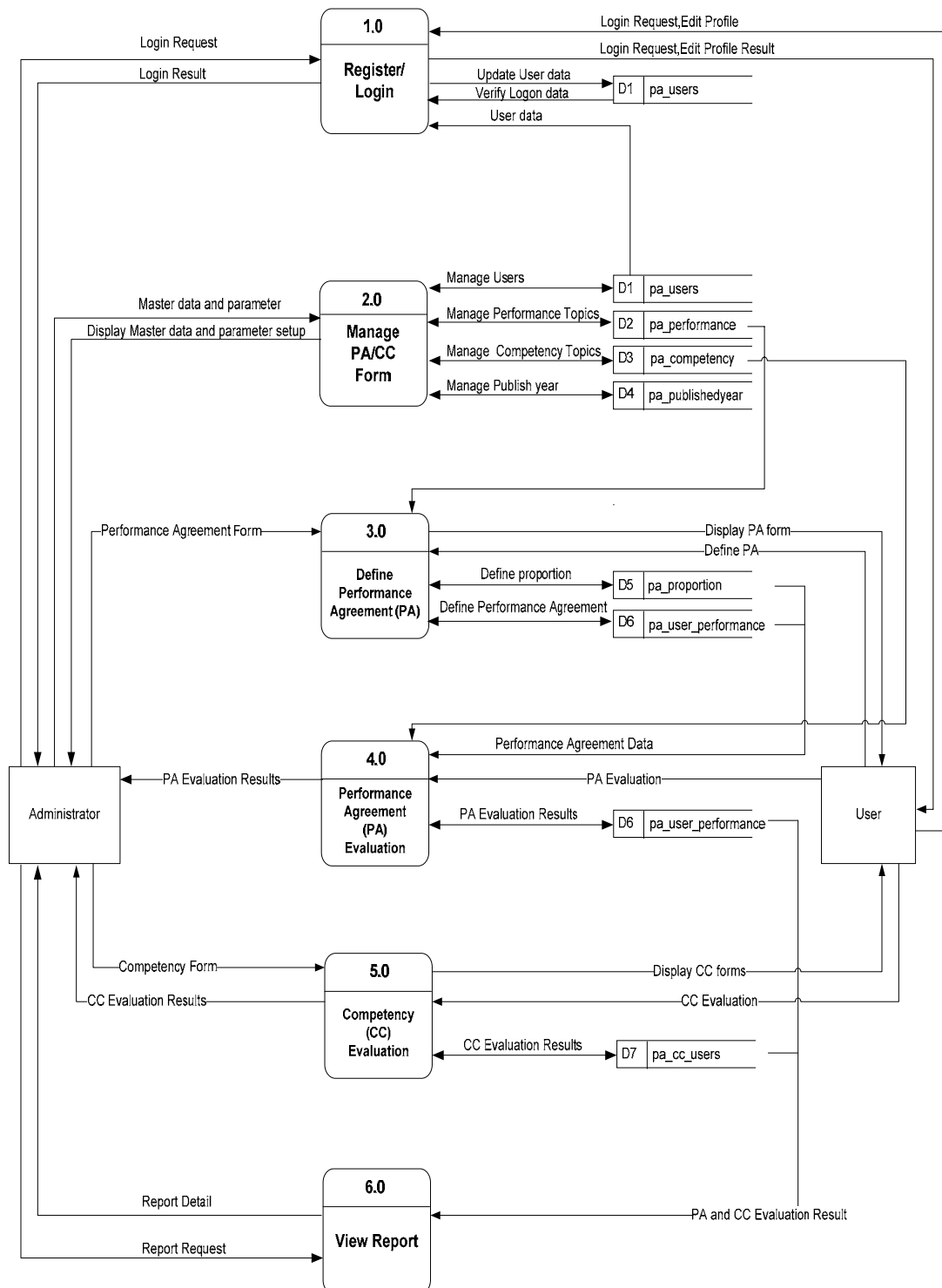


Figure 3.3: Data Flow Diagram Level 0 of Performance Evaluation

System

Level 0 : Data Flow diagram presents data source which consists of 6 processes

Process 1: Register/ Login

Process 2: Manage Performance Agreement form and Competency form

Process 3: Define Performance Agreement (PA)

Process 4: Performance Agreement (PA) Evaluation

Process 5: Competency (CC) Evaluation

Process 6: View Report

Login/Register Process Data Flow Diagram Level 1

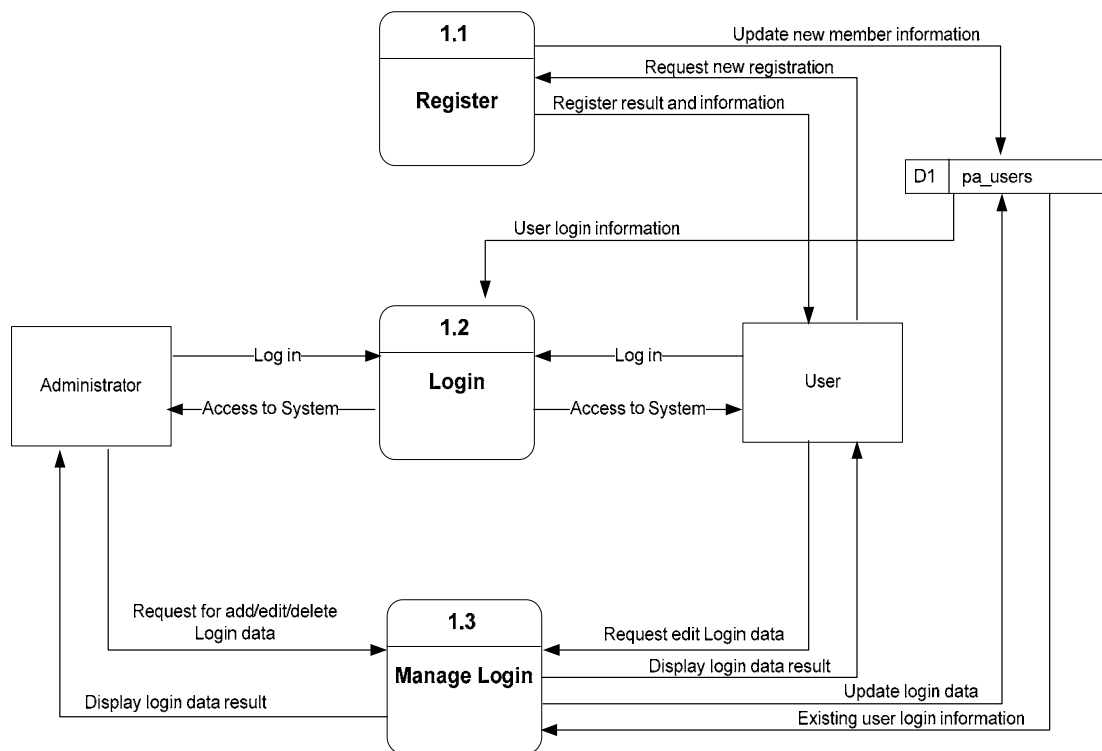


Figure 3.4: Data Flow Diagram Level1 of Register/Login Process

Process 1.1: Register process

- The user request for new registration.
- The system displays the register results.
- The system updates the register information to database.

Process 1.2: Login process

- The user request login to the system.
- The administrator login to the system.
- The system verifies login information to access the system.

Process 1.3: Manage Login process

- The user request for edit login to the system.
- The administrator request for add, edit and delete login data.
- The system retrieves the existing data and updates the new data to the database.

Manage Performance Agreement form and Competency form

Data Flow Diagram Level 1

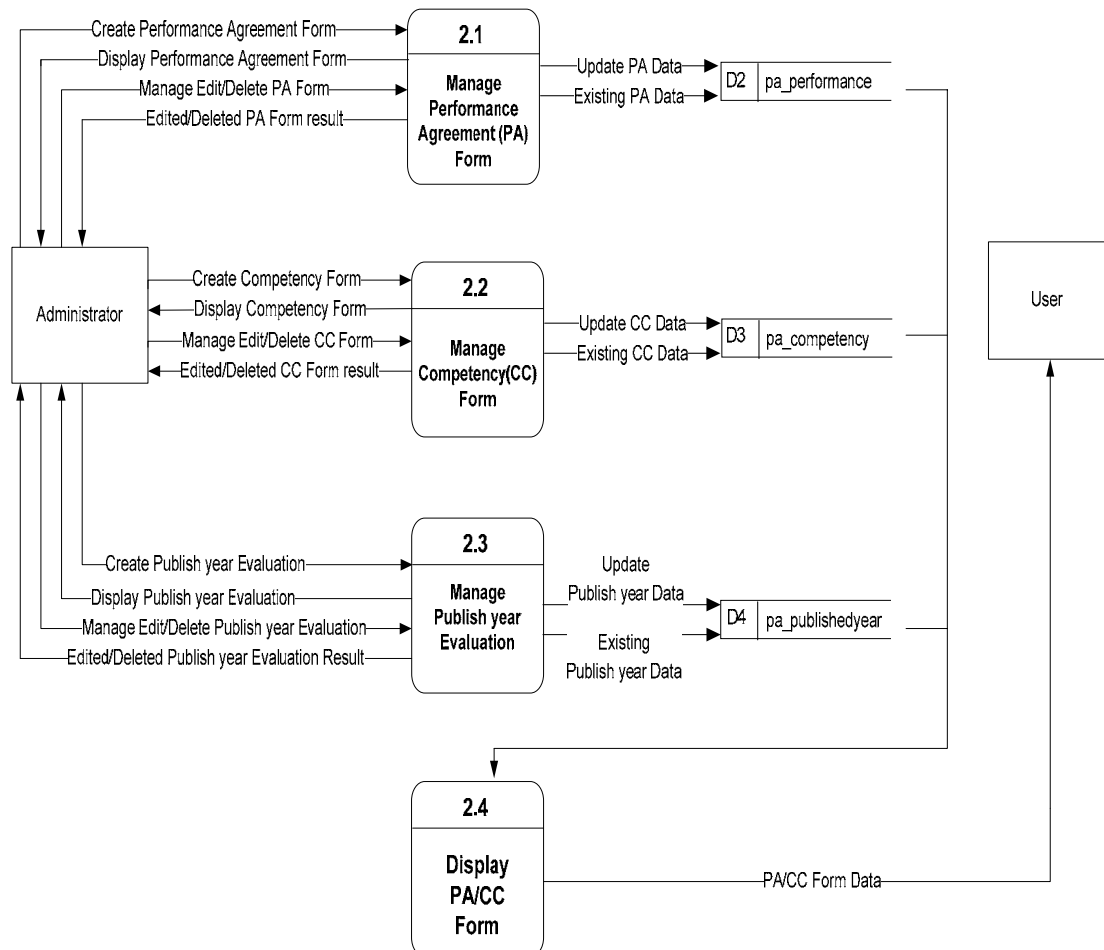


Figure 3.5: Data Flow Diagram Level 2 of Manage Performance Agreement form and Competency form

Process 2.1: Manage Performance Agreement (PA) Form

- The administrator creates performance agreement (PA) forms.
- The administrator edits or deletes user performance agreement from the existing data in the system.
- The system displayed performance agreement form which

already been updated into the system.

- The system retrieved the existing data and updates the new data to the database.

Process 2.2: Manage Competency (CC) Form

- The administrator creates competency (CC) forms.
- The administrator edits or deletes user competency from the existing data in the system.
- The system displayed competency form which already been updated into the system.
- The system retrieved the existing data and updates the new data to the database.

Process 2.3: Manage Publish year Evaluation

- The administrator creates publish year evaluation.
- The administrator edits or deletes user publish year evaluation the existing data in the system.
- The system displayed competency form which already been updated into the system.
- The system retrieved the existing data and updates the new data to the database.

Process 2.4: Manage Publish year Evaluation

- The system displayed performance agreement and competency form which already been updated into the system.

Define Performance Agreement (PA) Data Flow Diagram

Level 1

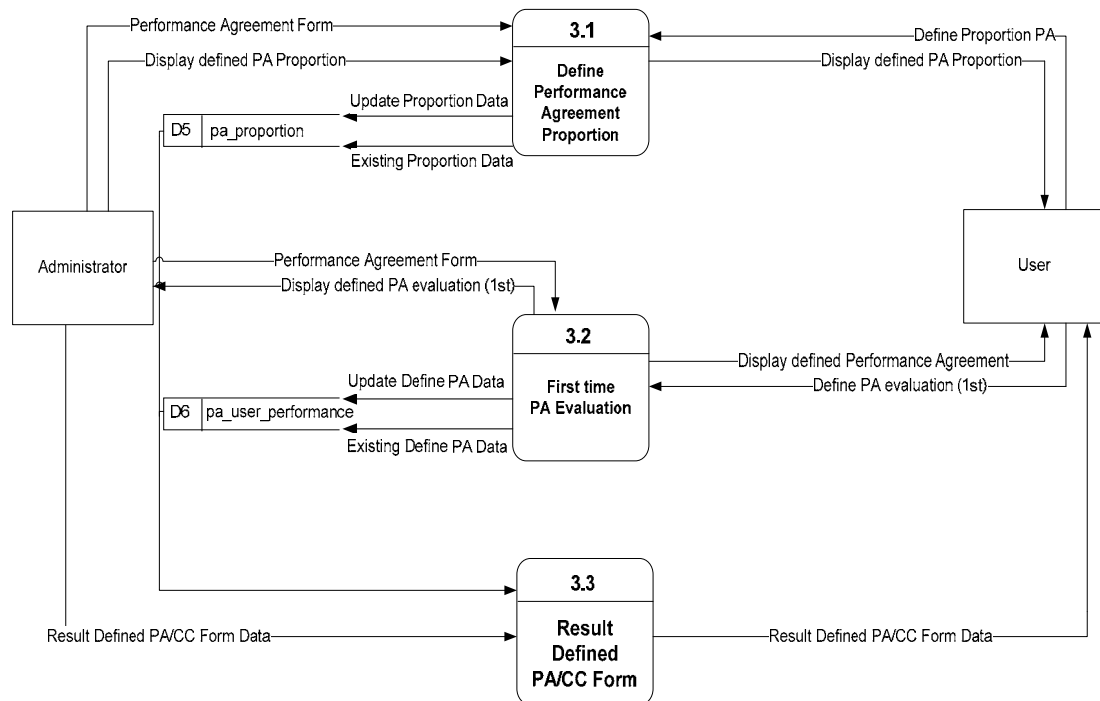


Figure 3.6: Data Flow Diagram Level1 of Define Performance Agreement (PA)

Process 3.1: Define Performance Agreement Proportion

- The user defines proportion of performance agreement.
- The administrator displayed user defined proportion.
- The system displayed performance agreement form.
- The system retrieved the existing data and updates the new data to the database.

Process 3.2: First time Performance Agreement Evaluation

- The user defines evaluate the performance agreement (topic/task/indicator) first time.
- The system displayed result evaluate of user, first time.
- The system retrieved the existing data and updates the new data to the database.

Process 3.3: Result defined PA/CC Form

- The system displayed evaluate result of user form which already been updated into the system.

Performance Agreement (PA) Evaluation Data Flow

Diagram Level 1

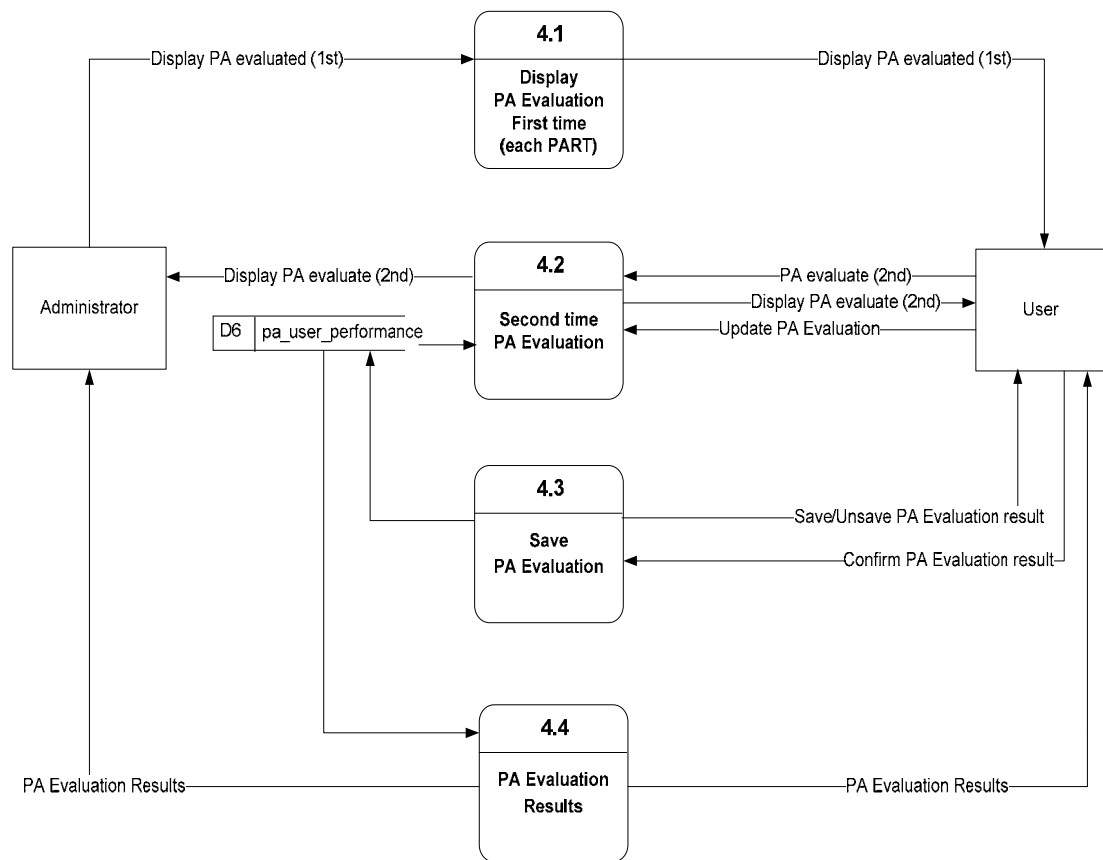


Figure 3.7: Data Flow Diagram Level1 of Performance Agreement (PA) Evaluation

Process 4.1: Performance Agreement Evaluation of Employee

- The system displayed evaluate result of user in first time which already been updated into the system.

Process 4.2: Second time Performance Agreement

Evaluation

- The user defines evaluate the performance agreement second time.
- The system displayed result evaluate of user, second time.
- The system retrieved the existing data and updates the new data to the database.

Process 4.3: Save Performance Agreement Evaluation

- The user submits evaluation result.
- The system retrieved the existing data and updates the new data to the database.

Process 4.4: Performance Agreement Evaluation Result

- The system display evaluation result which already been updated into the system

Competency Evaluation Data Flow Diagram Level 5

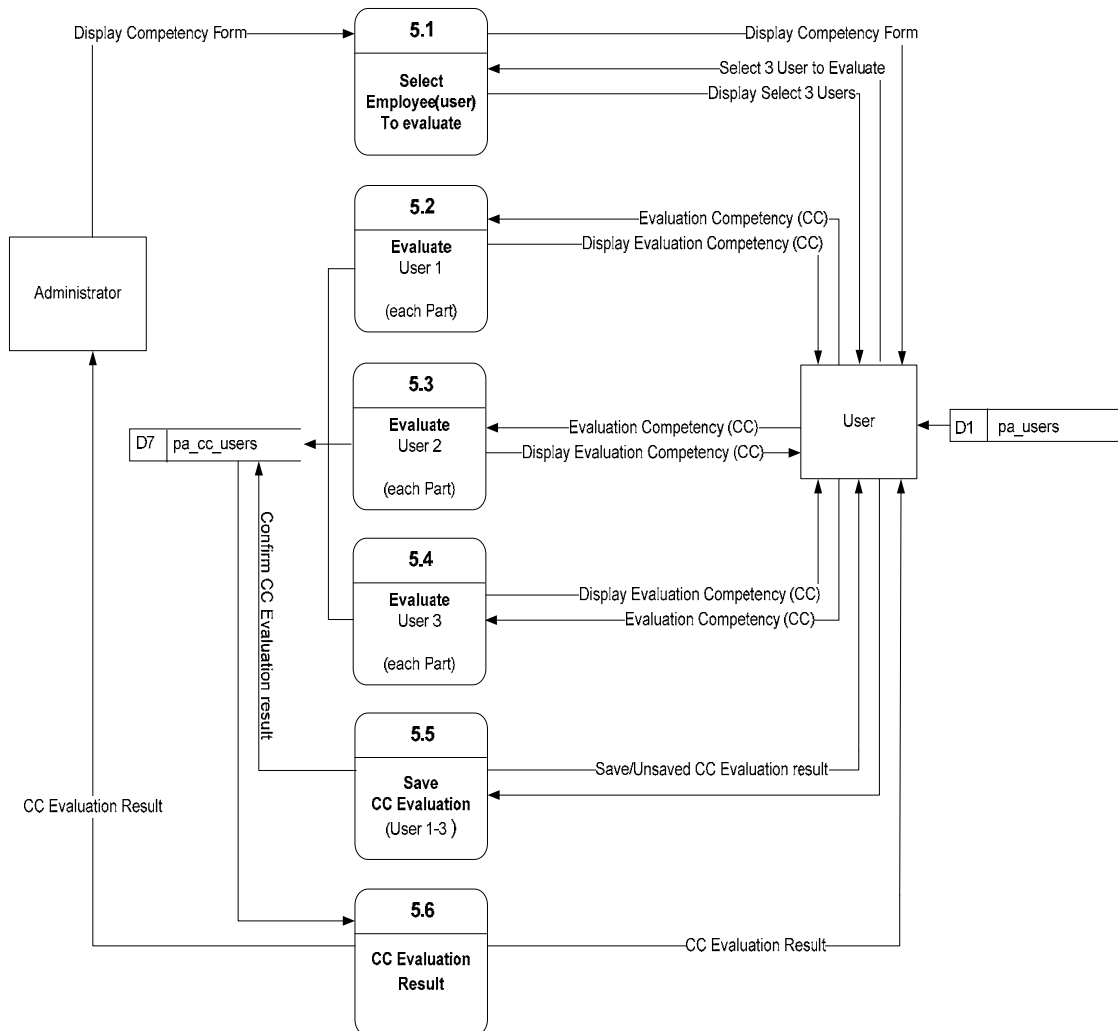


Figure 3.8: Data Flow Diagram Level1 of Competency Evaluation

Process 5.1: Select Employee to evaluate

- The administrator displayed competency form which already been updated into the system.
- The user selected 3 users to evaluate the competency.
- The system displayed evaluate result of user in first time which already been updated into the system.

Process 5.2: Evaluate to User 1

- The user evaluates the competency of user1.

- The system displayed result evaluate of user1.
- The system retrieved the existing data and updates the new data to the database.

Process 5.3: Evaluate to User 2

- The user evaluates the competency of user2.
- The system displayed result evaluate of user2.
- The system retrieved the existing data and updates the new data to the database.

Process 5.4: Evaluate to User 3

- The user evaluates the competency of user3.
- The system displayed result evaluate of user3.
- The system retrieved the existing data and updates the new data to the database.

Process 5.5: Save Competency Evaluation

- The user submits evaluation result.
- The system retrieved the existing data and updates the new data to the database.

Process 5.6: Competency Agreement Evaluation Result

- The system display evaluation result which already been updated into the system

View Report Data Flow Diagram Level 6

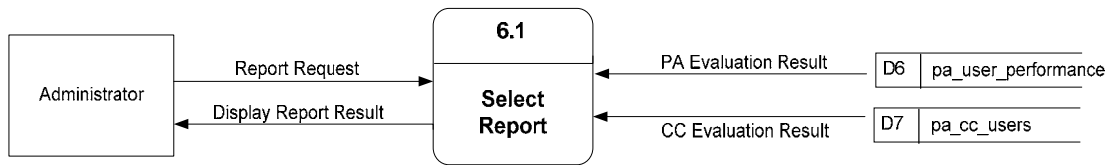


Figure 3.9: Data Flow Diagram Level1 of View Report

Process 6.1: Select Report process

- The administrator requests report.
- The system displayed report result.

3.1.4 System Development

All the information in analysis and design phase will be used to develop a Performance Evaluation Web-Based Application for Department of Chemical Engineering Faculty of Engineering, Mahidol University.

3.1.5 Testing

After the development of this application is completed, it is necessary to test it for finding errors. The debugging process will be used if there is error occurred.

3.1.6 Implementation and Evaluation

3.1.6.1 Implementation

New application is linked to the current system. Parallel transforming technique is used for converting to the new one.

3.1.6.2 Evaluation

Questionnaire is used for acceptance test of application about the system in the accuracy, response time and system functions.

3.1.7 Documentation

System document and user manual is written for the Department of Chemical Engineering Faculty of Engineering, Mahidol University including the recommendation for improving the system in the future.

3.2 Research Tools

3.2.1 Hardware Specification (Minimum requirement)

Server

- CPU : Pentium IV 2.0 GHz.
- Memory : 1 GB.
- Hard Disk : 80 GB.
- Monitor : VGA
- Peripheral : Mouse and keyboard
- Network Device : 10/100/1000 Ethernet NIC

Client

- CPU : Pentium IV 1.6 GHz.
- Memory : 512 MB
- Hard Disk : 40 GB.
- Monitor : VGA
- Peripheral : Mouse and keyboard
- Network Device : 10/100/1000 Ethernet NIC and Internet

connection for public access.

3.2.2 Software Specification

Server

- Operating System : Microsoft Windows Server 2008
- Database Server : MySQL
- Web Server : Apache

Client

- Operating System : Microsoft Windows XP Service Pack3
- Web Browsers : Microsoft Internet Explorer 7.0

Development Tools : PHP, Edit plus, Adobe Photoshop, Macromedia Dreamweaver

3.3 Research Schedule

The study consumes time as table below

Table 3.1 Research Schedule

Plan	Month							
	Dec	Jan	Feb	Mar	April	May	June	July
1.Preliminary planning and gather related information								
2. Determine function specification								
3. System Analysis and design								
4. System Development								
5. Test and Document								

CHAPTER IV

RESULTS

A development of the Performance Evaluation System consists of two parts: administration and end user portal. Administration Interface that for administrator to create the performance agreement form and the competency form and publish them in the front page and to manage the data such as delete performance agreement/ competency, manipulate performance agreement/competency categories. End user portal Interface is an application that facilitates user to register the users and reports details are following

4.1 Administrator Interface

4.1.1 Log in

After administrator log in to the system, the main page (figure 4.1) will be shown as follows;

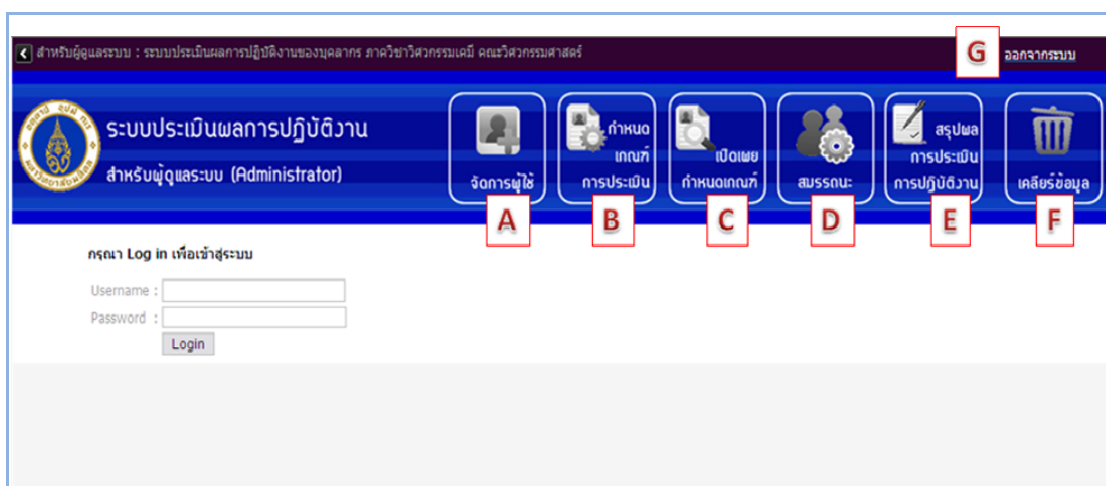


Figure 4.1 Main page

In the main page, there are composed of 7 menu bars i.e. A=User Profile, B=Create New Performance Agreement, C=Publish Evaluation, D= Create New Competency, E=Report Evaluation, F=Clear Data, and G=Log Out, where the title of each evaluation form will be shown in the main window rearranged by created evaluate times.

4.1.2 User Profile

In the User Profile menu, it allows both administrator and user to create user, view and edit personal information. However, only administrator can edit every user profile, the users can only edit and view their information as show in figure 4.2

	Name	Username	Enabled	Groups	E-mail	Last Visit	ID	Actions
<input type="checkbox"/>	Administrator	admin	1	Super Administrator	sc450617@hotmail.com	2009-11-19 07:11:33	1	Edit View Under
<input type="checkbox"/>	เจสสิกา สิวภาพทอง	chalemkate	1	Register	kate@hotmail.com	0000-00-00 00:00:00	2	Edit View Under
<input type="checkbox"/>	วราชัย นววิเศษ	arkom	1	Register	arkom@hotmail.com	0000-00-00 00:00:00	3	Edit View Under
<input type="checkbox"/>	มานพ โธธรสมบัติ	manoch	1	Register	sc450617@hotmail.com	0000-00-00 00:00:00	4	Edit View Under
<input type="checkbox"/>	ชนนินทร์ เชื้อเดชะพร	chonnanan	1	Register	chonnanan@dpim.go.th	0000-00-00 00:00:00	5	Edit View Under
<input type="checkbox"/>	สิริธนากร ธนวงกรวงษ์	siradanart	1	Register	b.prattana@hotmail.com	0000-00-00 00:00:00	6	Edit View Under
<input type="checkbox"/>	ศุภดามาส ธนวงกรวงษ์	supadamas	1		prisana.m@hotmail.com	0000-00-00 00:00:00	7	Edit View Under
<input type="checkbox"/>	อนุวรรตลักษณ์	bovomlak	1		bovomlak@hotmail.com	0000-00-00 00:00:00	8	Edit View Under
<input type="checkbox"/>	อ	123	1	Register		0000-00-00 00:00:00	9	Edit View Under

Figure 4.2 The user profile editing page

4.1.3 Create New Performance Agreement

In the function “Create New Performance Agreement” the administrator (only) can choose “Create Performance Agreement” from menu bar and complete the parameters for the performance agreement as shown in figure 4.3. These composed of;

A = Categorizing performance agreement such as; Teaching and Learning, Research/Academic services, Student Development, Fostering the cultural/Management Department, Strategy / Policy.

B = Define performance agreement topics.

C = Creating performance agreement choices for the performance agreement form.

D = Choosing number “quantity / unit / percent (weight)” for the performance agreement choices.

E = Select clause of the performance agreement choices.

ระบบประเมินผลการปฏิบัติงาน

สำหรับครูและระบบ (Administrator)

จัดการผู้จัด

กำหนด
เกณฑ์
การประเมิน

เปิดเผยแพร่
กำหนดเกณฑ์

สมรรถนะ

สรุปผล
การประเมิน
การปฏิบัติงาน

แก้ไขข้อมูล

กำหนดข้อตกลงการประเมินผลการปฏิบัติงาน

A **แก้ไข/เพิ่ม ส่วนหน่วยงานวิชาการ**

ส่วนการเรียนการสอน

ส่วนวิจัย / การวิจัยและพัฒนา

ส่วนการพัฒนาระบบ/การบริการวิชาการ

ส่วนงานบริหารทั่วไป/งานธุรการ

บันทึก | รีเซ็ต

ลบ

ลบ

ลบ

ลบ

ลบ

กรุณาเลือก ครั้งที่ 1 และด้านที่ต้องการกำหนดข้อมูล :

ส่วนหน่วยงานวิชาการ

ครั้งที่ 1 ▼ (1 ค.ย. - - เดือนปี - - - 25, 29 ค.พ. 25__)

ด้านการเรียนการสอน ▼
เลือกปีของข้อมูล ▼

แก้ไข/เพิ่ม ส่วนหน่วยงานสนับสนุน

บันทึก | รีเซ็ต

กรุณาเลือก ครั้งที่ 1 และด้านที่ต้องการกำหนดข้อมูล :

ส่วนหน่วยงานสนับสนุน

ครั้งที่ 1 ▼ (1 ค.ย. - - เดือนปี - - - 25, 29 ค.พ. 25__)

▼
เลือกปีของข้อมูล ▼

B 1.ด้านการเรียนการสอน(1 ค.ย.2553-28,29 ค.พ.2554)

ลำดับ	ข้อตกลงการปฏิบัติงาน	จำนวน	หน่วย	คิดเป็น	ร้อยละ (น้ำหนัก)	ลบ
1	ด้านการเรียนการสอน					
1.1	เข้าร่วมวิทยานิพนธ์	1	หน่วยกิต	=	1 หน่วยกิต=5%	✖
1.2	ผลการประเมินการสอนของอาจารย์จากนักศึกษา			=	2%	✖
1.3	การส่งเอกสารต่าง ๆ ครบถ้วนเวลาที่กำหนด					✖
	-ส่งเอกสาร	3	%		3 % =	✖
	-ส่งเอกสารประเมิน	2	%		2 % =	✖
1.4	ผลการสอน(ผลการสอน 1 วิชาหรือในหน่วยกิตเพื่อการผลิต)					✖
	-โครงสร้างรายวิชา	1	เรื่อง	=	1 เรื่อง=2%	✖
	-ผลการสอนหรือเอกสารการสอน	1	เรื่อง	=	1 เรื่อง=6%	✖
	-ผลการสอน	1	เรื่อง	=	1 เรื่อง=2%	✖
1.5	อื่นๆ					✖
1.6	การนำผลการปฏิบัติงานไปเสนอ/โครงการ/นวัตกรรม				5%	✖

C **แก้ไขข้อมูล/แก้ไข**

ลำดับ

#

D

จำนวน

- ▼

หน่วย

▼

คิดเป็น

= ▼ %

E

เป็น

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ชื่อ

ชื่อ

- No - ▼

รายละเอียด

เพิ่ม

ลบ

ไม่

รีเซ็ต

เพิ่มข้อมูล

Figure 4.3 The “Create Performance Agreement” page

4.1.4 Edit Performance Agreement

On the main page, administrator able to edit performance agreement such as performance agreement choices and editing number (quantity / unit / percent). , as show in figure 4.4

สำนักงานคณะกรรมการการอุดมศึกษา

ระบบประเมินผลการปฏิบัติงาน

สำหรับผู้ดูแลระบบ (Administrator)


 จัดการผู้ใช้


 กำหนด
เกณฑ์
การประเมิน


 เปิดดู
กำหนดเกณฑ์


 สมรรถนะ


 สรุปผล
การประเมิน
การปฏิบัติงาน


 เคลียร์ข้อมูล

1.ด้านการเรียนการสอน(1 ค.บ.2553-28,29 ค.พ.2554)

ลำดับ	ข้อคกของการปฏิบัติงาน	จำนวน	หน่วย	คิดเป็น	ร้อยละ (น้ำหนัก)	ลบ
1	ด้านการเรียนการสอน					
1.1	จำนวนวิชาที่สอน	1	หน่วยกิต	=	1 หน่วยกิต=5%	✖
1.2	ผลการประเมินการสอนของอาจารย์จากนักศึกษา			=	2%	✖
1.3	การส่งเอกสารต่าง ๆ ตรงตามเวลาที่กำหนด					✖
	-ส่งเกรด	3	%		3 % =	✖
	-ส่งเอกสารประเมิน	2	%		2 % =	✖
1.4	สื่อการสอน(สื่อการสอน 1 วิชา หรือในรูปแผนฉบับอิเล็กทรอนิกส์)					✖
	-โครงสร้างรายวิชา	1	เรื่อง	=	1 เรื่อง=2%	✖
	-สื่อการสอนหรือเอกสารการสอน	1	เรื่อง	=	1 เรื่อง=6%	✖
	-แผนการสอน	1	เรื่อง	=	1 เรื่อง=2%	✖
1.5	อื่นๆ					✖
1.6	การประกันคุณภาพ/โครงการนวัตกรรม			=	5%	✖

เพิ่มข้อมูล/แก้ไข

ลำดับ

#

จำนวนวิชาที่สอน

เป็น

ข้อ

ข้อ

ข้อ

ข้อ

ข้อคกของการปฏิบัติงาน

จำนวน

หน่วย

คิดเป็น

ร้อยละ (น้ำหนัก)

รวมเพิ่ม

เดิม

ไม่

ใช่

1

หน่วยกิต

=

5 %

รวมเพิ่ม

เดิม

ไม่

ใช่

บันทึก

เพิ่มข้อมูล

Figure 4.4 Edit Performance Agreements

4.1.5 Publish Evaluation

In Publish Evaluation menu, administrator can use this feature to control input status of personal information which will be display on the registration area by set the visibility for that around the evaluation (shown or unshown) to make the program more friendly interface and easy for user to filling registration information as show in figure 4.5.

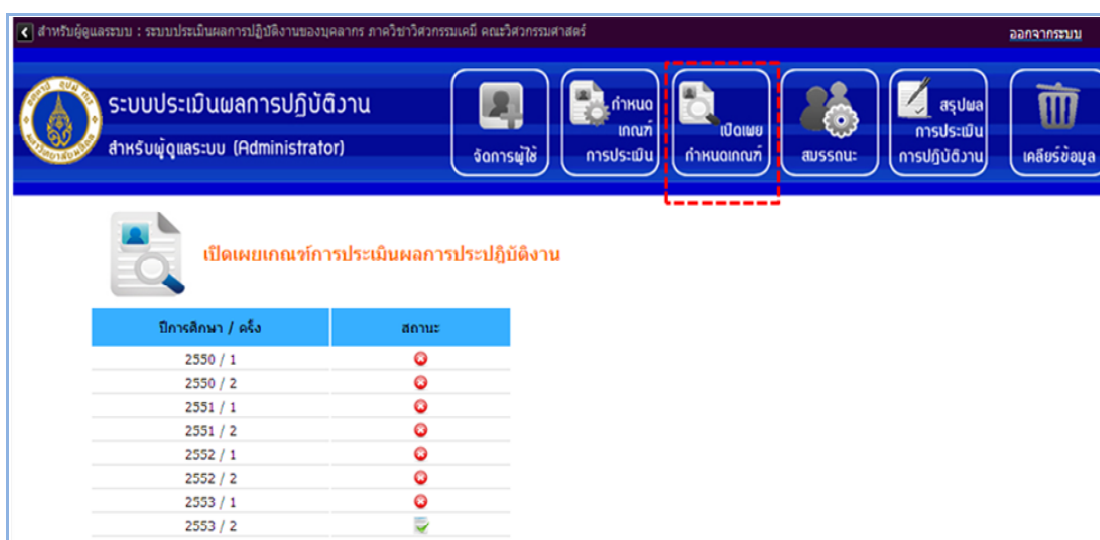


Figure 4.5 The page of Publish Evaluation

4.1.6 Create New Competency

In the function “Create New Competency” the administrator (only) can choose “Create Competency” from menu bar and complete the parameters for the competency as shown in figure 4.3. These composed of;

A = Define competency topics and definitions.

B = Creating multiples competency choices for the competency form.

C = Importing file data that related competency information.

สำหรับผู้อนุมัติระบบ : ระบบประเมินผลการปฏิบัติงานของบุคลากร ภาควิชาวิศวกรรมเคมี คณะวิศวกรรมศาสตร์

ระบบประเมินผลการปฏิบัติงาน สำหรับผู้ดูแลระบบ (Administrator)

จัดการผู้ใช้ กำหนดเกณฑ์การประเมิน กำหนดเกณฑ์การประเมิน สมรรถนะ สรุปผลการประเมิน การปฏิบัติงาน เติมนิยามข้อมูล

กำหนดหัวข้อประเมินสมรรถนะ

สมรรถนะหลัก(Core Competency)

สมรรถนะหลัก/ด้าน: B

คำอธิบาย: C

บันทึก ยกเลิก

ลำดับที่	ด้าน	คำอธิบาย	คำอธิบายเกณฑ์	แก้ไข	ลบ
1	ความซื่อสัตย์สุจริต (Integrity)	ความซื่อสัตย์สุจริต จริยธรรม ซื่อสัตย์สุจริต ปฏิบัติงานด้วยความโปร่งใส มีวินัยในตนเอง ยึดมั่นในหลัก คุณธรรม จริยธรรมในวิชาชีพ จักหาทางหาข้อเท็จจริงและไว้วางใจได้เสมอ		แก้ไข	ลบ
2	การมุ่งผลสัมฤทธิ์ (Achievement Motivation)	ความมุ่งมั่นในการปฏิบัติงานให้เต็มความสามารถ โดย ใช้เกณฑ์วัดผลสัมฤทธิ์ที่ส่วนงานหรือ มหาวิทยาลัยกำหนด อีกทั้งยังคำนึงถึง การสร้างสรรคเพื่อพัฒนาผลงานหรือกระบวนการปฏิบัติงานตาม เป้าหมายที่ยากและท้าทายชนิดที่อาจไม่เคยมีใครสามารถกระทำได้นั่นเอง		แก้ไข	ลบ
3	ความรับผิดชอบในงาน (Responsibility)	ความมุ่งหน้า รับผิดชอบ มุ่งมั่นที่จะปฏิบัติงานให้ประสบความสำเร็จอย่างมีประสิทธิภาพ คำนึงถึง ความคุ้มค่าในการใช้ทรัพยากรและเป็นประโยชน์ต่อส่วนราชการและองค์กร		แก้ไข	ลบ
4	การทำงานเป็นทีม (Teamwork)	ความเข้าใจในบทบาท และหน้าที่ของตนเองในฐานะที่เป็นสมาชิกหนึ่งของทีม รวมทั้งการมีส่วนร่วมในการทำงาน การแก้ไขปัญหา และการแลกเปลี่ยนประสบการณ์และความคิดเห็นต่าง ๆ กับสมาชิก ในทีม		แก้ไข	ลบ
5	การวางแผนการทำงานอย่างเป็นระบบ (Systematic Job Planning)	ความสามารถในการวางแผน และการวิเคราะห์ถึงปัญหาและอุปสรรคที่อาจเกิดขึ้นไว้ล่วงหน้าเสมอ รวมทั้งความสามารถ ในการตรวจสอบข้อมูลและรายละเอียดต่าง ๆ ที่เกี่ยวข้องและแก้ไขได้		แก้ไข	ลบ

Figure 4.6 The “Create Competency” page

This system will be the competency of the university has five aspects are Integrity, Achievement Motivation, Responsibility, Teamwork, Systematic Job Planning. The level 5 rating levels which the rating level admin can edit the score but can cause calculation errors in the system.

4.1.7 Edit Competency

On the main page, administrator able to edit competency information , as show in figure 4.4

สำหรับผู้อนุมัติระบบ : ระบบประเมินผลการปฏิบัติงานของบุคลากร ภาควิชาวิศวกรรมเคมี คณะวิศวกรรมศาสตร์

ระบบประเมินผลการปฏิบัติงาน สำหรับผู้ดูแลระบบ (Administrator)

จัดการผู้ใช้ กำหนดเกณฑ์การประเมิน กำหนดเกณฑ์การประเมิน สมรรถนะ สรุปผลการประเมิน การปฏิบัติงาน เติมนิยามข้อมูล

กำหนดหัวข้อประเมินสมรรถนะ

สมรรถนะหลัก(Core Competency)

สมรรถนะหลัก/ด้าน: ความซื่อสัตย์สุจริต (Integrity)

คำอธิบาย: ความซื่อสัตย์สุจริต จริยธรรม ซื่อสัตย์สุจริต ปฏิบัติงานด้วยความโปร่งใส มีวินัยในตนเอง ยึดมั่นในหลัก คุณธรรม จริยธรรมในวิชาชีพ จักหาทางหาข้อเท็จจริงและไว้วางใจได้เสมอ

บันทึก ยกเลิก

ลำดับที่	ด้าน	คำอธิบาย	คำอธิบายเกณฑ์	แก้ไข	ลบ
1	ความซื่อสัตย์สุจริต (Integrity)	ความซื่อสัตย์สุจริต จริยธรรม ซื่อสัตย์สุจริต ปฏิบัติงานด้วยความโปร่งใส มีวินัยในตนเอง ยึดมั่นในหลัก คุณธรรม จริยธรรมในวิชาชีพ จักหาทางหาข้อเท็จจริงและไว้วางใจได้เสมอ		แก้ไข	ลบ
2	การมุ่งผลสัมฤทธิ์ (Achievement Motivation)	ความมุ่งมั่นในการปฏิบัติงานให้เต็มความสามารถ โดย ใช้เกณฑ์วัดผลสัมฤทธิ์ที่ส่วนงานหรือ มหาวิทยาลัยกำหนด อีกทั้งยังคำนึงถึง การสร้างสรรคเพื่อพัฒนาผลงานหรือกระบวนการปฏิบัติงานตาม เป้าหมายที่ยากและท้าทายชนิดที่อาจไม่เคยมีใครสามารถกระทำได้นั่นเอง		แก้ไข	ลบ

Figure 4.7 Edit Competency

4.1.8 Report Evaluation

After evaluating in the Performance Agreement and the Competency, administrator can view report as show in figure 4.8. The system allows only the admin will be able to know the results of all user.

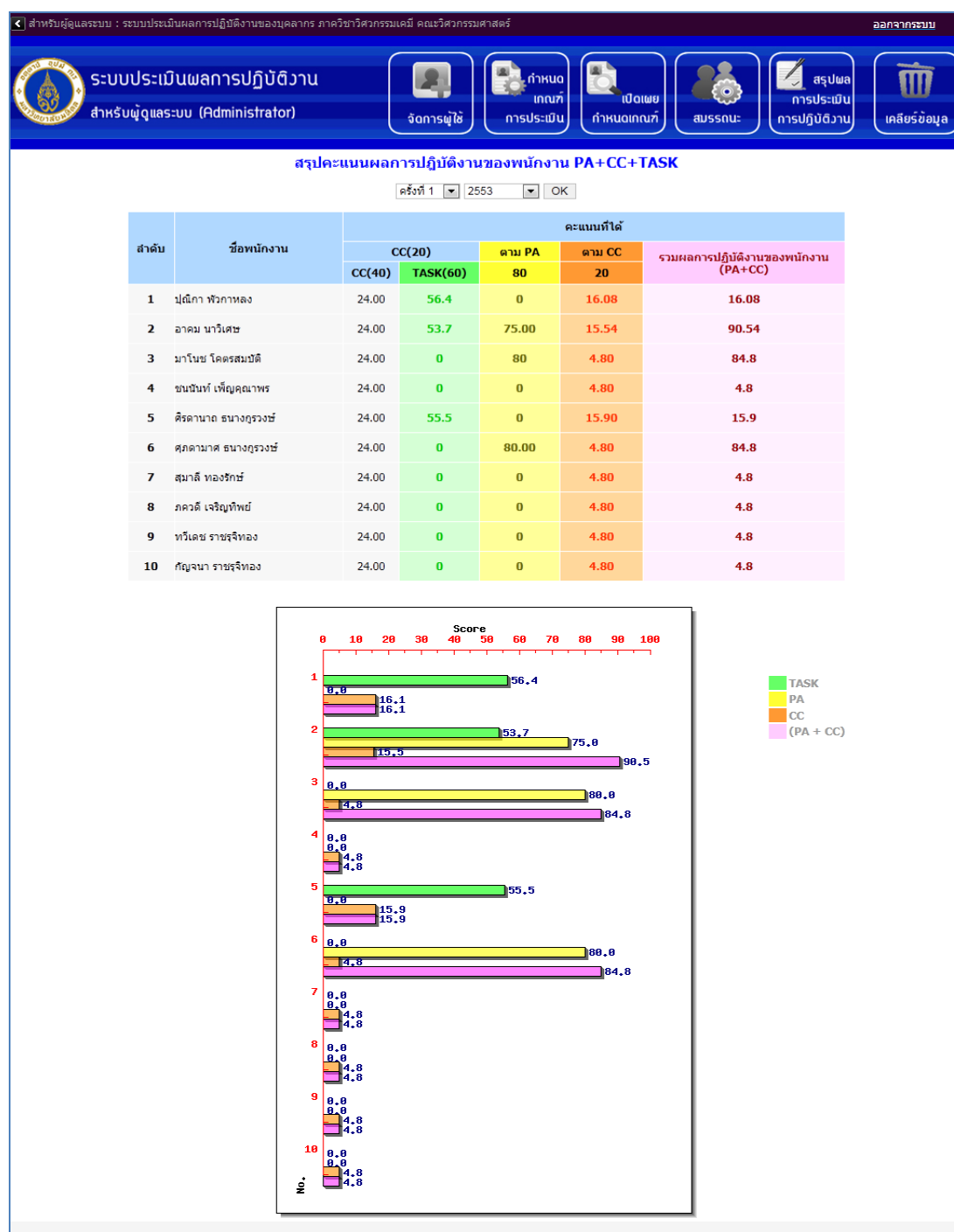
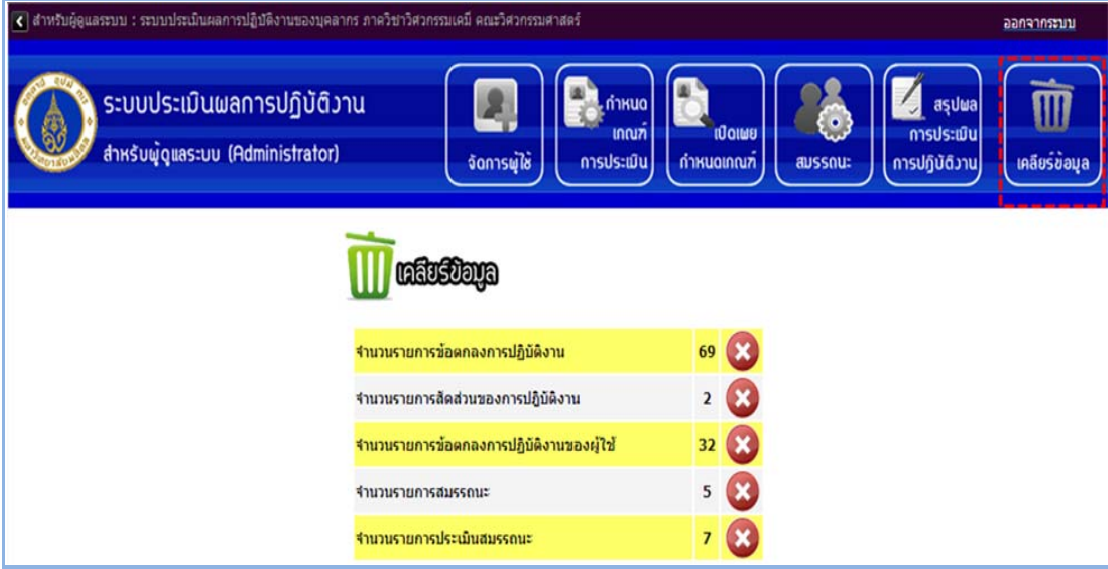


Figure 4.8 The summary in the report evaluation page

4.1.9 Clear Data

After evaluating in the Performance Agreement and the Competency, administrator can view report as show in figure 4.9.



รายการข้อมูลที่จะลบ	จำนวน	
จำนวนรายการข้อมูลการปฏิบัติงาน	69	X
จำนวนรายการสัดส่วนของการปฏิบัติงาน	2	X
จำนวนรายการข้อมูลการปฏิบัติงานของผู้ใช้	32	X
จำนวนรายการสมรรถนะ	5	X
จำนวนรายการประเมินสมรรถนะ	7	X

Figure 4.9 The page for clear data.

4.2 End User Portal Interface

4.2.1 Register

In the user interface the feature that allow user to access composed of evaluating Performance Agreement, Competency and viewing Report evaluation. As user registered and login to the system, the main page will appear as shown in figure 4.10.

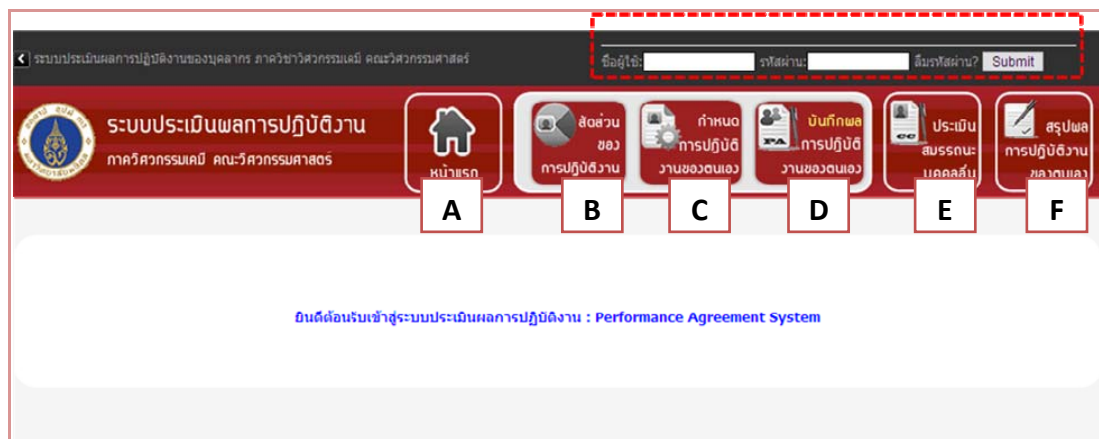


Figure 4.10 The main menu for user after login.

In the main menu, there are composed of 6 menu bars i.e. A=Home , B= Determine the proportion of performance agreement , C= Determine the Pre-performance agreement, D=Update the performance agreement, E= Competency Evaluation and F= Report Evaluation.

4.2.2 Determine the proportion of performance agreement

Logged in user can determine a side and proportion of performance agreement as shown in figure 4.11.

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ชื่อผู้ใช้งาน: เจดิมเกศ พัวกาหลง | เปลี่ยนรหัสผ่าน | Logout

ระบบประเมินผลการปฏิบัติงาน
ภาควิชาวิศวกรรมเคมี คณะวิศวกรรมศาสตร์

หน้าแรก | สัดส่วน | กำหนด | บันทึกผล | ประเมิน | สรุปผล
การปฏิบัติงาน | งานขอตนเอง | การปฏิบัติ | งานขอตนเอง | การปฏิบัติ | งานขอตนเอง | การปฏิบัติ | งานขอตนเอง

สัดส่วนของการปฏิบัติงาน

ชื่อ: เจดิมเกศ พัวกาหลง ตำแหน่ง: นักวิชาการคอมพิวเตอร์ ครั้งที่ 2 (1 มี.ค.2553 - 31 ส.ค.2553)

ข้อตกลงการปฏิบัติงาน : กลุ่มเน้นด้าน -Please select-
-Please select-
เน้นการสอน
เน้นวิจัย/บริการ
ทั่วไป
บริหาร

ชื่อ: เจดิมเกศ พัวกาหลง ตำแหน่ง: นักวิชาการคอมพิวเตอร์ ครั้งที่ 1 (1 ก.ย.2553 - 28,29 ก.พ.2554)

ข้อตกลงการปฏิบัติงาน : กลุ่มเน้นด้าน เน้นการสอน

กลุ่ม เน้นการสอน	สัดส่วนงาน ไม่ต่ำกว่าร้อยละ	สัดส่วนที่ตกลง	สัดส่วนที่ทำได้ตามจริง
ด้านการเรียนการสอน	5		
ด้านวิจัย / การบริการวิชาการ	5		
ด้านการพัฒนานักศึกษา	5		
ทำนุบำรุงศิลปวัฒนธรรม/การบริหารภาควิชา	5		
งานตามยุทธศาสตร์ หรือนโยบาย	5		

เลือกป้อนข้อมูล

Figure 4.11 The page for determine the proportion of performance agreement.

This procedure, when a user points to the standard ratio and percentage points cannot be altered again. Because the system is to protect the user can not return to fix the outcome of the score after the final assessment and points to the user associated will deal with the process of **Determine the Pre-performance agreement**. Because if the proportion of performance agreement values less than or greater than

specified. The system will generate a warning message to the user input back again as shown in figure 4.12.

4.2.3 Determine the Pre-performance agreement

After user determines the proportion of performance agreement, the user determines the pre-performance agreement as shown in figure 4.12. These composed of;

A = Select categorizing performance agreement.

B = Choosing number of quantity and notes for the pre-performance agreement.

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ชื่อผู้ใช้งาน: เจริญยศ พัวกาแสง | เปลี่ยนรหัสผ่าน | Logout

ระบบประเมินผลการปฏิบัติงาน
ภาควิชาวิศวกรรมเคมี คณะวิศวกรรมศาสตร์

หน้าแรก | เพิ่มข้อมูล | แก้ไขข้อมูล | พิมพ์เอกสาร | อนุมัติเอกสาร | ยกเลิกเอกสาร

กำหนดการประเมินผลการปฏิบัติงาน

ด้านการเรียนการสอน

1. ด้านการเรียนการสอน (1 ก.ย.2553-28,29 ก.พ.2554)

ลำดับ	ข้อตกลงการปฏิบัติงาน	จำนวน	หน่วย	หมายเหตุ	ทำกับ
1	ด้านการเรียนการสอน				
1.1	จำนวนวิชาที่สอน (1 หน่วยกิต=5%)	3	หน่วยกิต	โปรดระบุ EG1111	
1.12	ผลการประเมินการสอนของอาจารย์จากนักศึกษา(2%)				
1.12	การส่งเอกสารต่าง ๆ ตรงตามเวลาที่กำหนด()				
	-ส่งเกรด (3 %=)		%		
	-ส่งเอกสารประเมิน (2 %=)		%		
1.11	สื่อการสอน(สื่อการสอน 1 วิชา หรือในรูปแบบอิเล็กทรอนิกส์())				
	-โครงสร้างรายวิชา (1 เรื่อง=2%)	2	เรื่อง		
	-สื่อการสอนหรือเอกสารการสอน(1 เรื่อง=6%)		เรื่อง		
	-แผนการสอน (1 เรื่อง=2%)		เรื่อง		
1.11.อื่น ๆ()					
1.12	การประกวดโปสเตอร์/โครงการวิศวกรรมเคมี (5%)	5			

บันทึกข้อมูล

Figure 4.12 The page for determine the Pre-performance agreement.

4.2.4 Update the performance agreement

After user determines the pre-performance agreement, the user can update the performance agreement and attaches documents as evidence. As shown in figure 4.13. These composed of;

A = Select categorizing performance agreement.

B = Updating number of quantity for the performance agreement.

C = Display documents and attaches documents as evidence.

ระบบประเมินผลการปฏิบัติงานของบุคลากร ภาควิชาวิศวกรรมเคมี คณะวิศวกรรมศาสตร์

ชื่อผู้ใช้งาน: เจริญ เกษม วัฒนาทอง | เปลี่ยนรหัสผ่าน | Logout

ระบบประเมินผลการปฏิบัติงาน
ภาควิชาวิศวกรรมเคมี คณะวิศวกรรมศาสตร์

หน้าแรก | ส่วนงาน | กำหนดการปฏิบัติงาน | บันทึกผลการปฏิบัติงาน | ประเมินสมรรถนะบุคคลอื่น | สรุปผลการปฏิบัติงานของตนเอง

ประเมินผลการปฏิบัติงานตนเอง

ด้านการเรียนการสอน [ตัวชี้วัด / การบริการวิชาการ](#) [ด้านการพัฒนานักศึกษา](#) [ทำปริญญานิพนธ์/วิทยานิพนธ์/การบริการวิชาการ](#) [งานความเชี่ยวชาญพิเศษหรืองานวิจัย](#)

1.ด้านการเรียนการสอน (1 ก.ย.2553-28,29 ก.พ.2554)

ลำดับ	ข้อตกลงการปฏิบัติงาน	เกณฑ์ที่ตกลงไว้		หมายเหตุ	ทำได้ตามข้อตกลง			
		จำนวน	หน่วย		เท่ากับ	เอกสารแนบ	เท่ากับ	
1	ด้านการเรียนการสอน							
1.1.	จำนวนวิชาที่สอน (1 หน่วยกิต=5%)	7	หน่วยกิต	35	EG111 MIS,EG112 OS			
1.12.	ผลการประเมินการสอนของอาจารย์จากนักศึกษา(2%)	2		2				
1.12.	การส่งเอกสารต่าง ๆ ตรงตามเวลาที่กำหนด()							
	-ส่งเกรด (3%)							
	-ส่งเอกสารประเมิน (2%)							
1.11.	สื่อการสอน / สื่อการสอน 1 วิชา หรือในรูปแบบอิเล็กทรอนิกส์()							
	-โครงสร้างรายวิชา (1 เรื่อง=2%)		เรื่อง	0				
	-สื่อการสอนหรือเอกสารการสอน(1 เรื่อง=6%)		เรื่อง	0				
	-แผนการสอน (1 เรื่อง=2%)		เรื่อง	0				
1.11.	อื่น ๆ()							
	-การประกวดโปสเตอร์/โครงงานวิศวกรรมเคมี (5%)							
1.11.	การส่งเอกสารต่าง ๆ ตรงตามเวลาที่กำหนด()							
1.12.	การส่งเอกสารต่าง ๆ ตรงตามเวลาที่กำหนด()							
	-ส่งเกรด (3 %=)	3	%					
	-ส่งเอกสารประเมิน (2 %=)	2	%					
1.11.	สื่อการสอน(สื่อการสอน 1 วิชา หรือในรูปแบบอิเล็กทรอนิกส์())							
	-โครงสร้างรายวิชา (1 เรื่อง=2%)	2	เรื่อง	4				
	-สื่อการสอนหรือเอกสารการสอน(1 เรื่อง=6%)	1	เรื่อง	6				
	-แผนการสอน (1 เรื่อง=2%)	1	เรื่อง	2				
1.11.	อื่น ๆ()							
1.12.	การประกวดโปสเตอร์/โครงงานวิศวกรรมเคมี (5%)	5	%	5				
1.12.	nnnn(2 unit=5%)		unit	0				

บันทึกข้อมูล

Figure 4.13 The page for update the performance agreement.

4.2.5 Competency Evaluation

The Competency Evaluation allow user to select user to be evaluate maximum 3 persons as shown in figure 4.14. These composed of;

A = Select user to be evaluate.

B = Choosing to evaluation.

C = Display user to be evaluate.

D = Define competency topics and definition.

E = Voting a level competency to user.

F = Report result evaluation.

ระบบประเมินผลการปฏิบัติงาน

หน้าแรก

ส่วนงาน

การปฏิบัติงาน

งานของงาน

งานของงาน

ประเมินสมรรถนะบุคคลอื่น

สรุปผลการปฏิบัติงาน

แบบประเมินสมรรถนะ

ชื่อผู้ประเมิน: เติมนกศ พัทธการสง ตำแหน่ง: ศึกษานิเทศก์

ครั้งที่ 2 (1 ต.ค.2553 - 31 ต.ค.2553)

กรุณาร่วมประเมินสมรรถนะเพื่อประกอบการพิจารณาการประเมินสมรรถนะ ศึกษานิเทศก์

คุณลักษณะ: นักแนะแนว/จิตวิทยา/การแนะแนว/การแนะแนว/การแนะแนว/การแนะแนว

โดยท่านสามารถเลือกประเมินได้ ไม่เกิน 3 ท่าน ในแต่ละด้าน

คลิกเพื่อดูรายชื่อผู้ประเมิน

เลือกผู้ถูกประเมิน: อาตม นวโรจน์

เพิ่มผู้ถูกประเมิน

ลำดับ	บุคคลที่ท่านต้องการประเมิน	ลบ	ประเมิน	สถานะ
1	ศิริลักษณ์ ธนากุศล	ลบ	คลิกเพื่อประเมิน	1
2	ศุภลามาต ธนากุศล	ลบ	คลิกเพื่อประเมิน	0

กรุณาประเมินผู้ถูกประเมินให้ครบทุกด้าน

ชื่อผู้ถูกประเมิน: ศุภลามาต ธนากุศล ตำแหน่ง: นักแนะแนวในโรงเรียน

ลำดับที่	ด้าน	คำอธิบาย	คำอธิบายเกณฑ์	ระดับสมรรถนะที่ให้คะแนน
1	ความยึดมั่นในคุณธรรม (Integrity)	ความมีคุณธรรม จริยธรรม ซื่อสัตย์สุจริต ปฏิบัติตนด้วยความโปร่งใส มีวินัยในตนเอง ยึดมั่นในหลักคุณธรรม จริยธรรมในวิชาชีพ รักษาความซื่อสัตย์และไว้วางใจได้เสมอ		2
2	การมุ่งผลสัมฤทธิ์ (Achievement Motivation)	ความมุ่งมั่นในการปฏิบัติงานให้ได้ผลเกินมาตรฐานที่มีอยู่ โดยใช้กลยุทธ์หรือวิธีการที่เหมาะสมหรือ มนวิสัยที่ยากเกินกว่าที่คนอื่นจะทำได้ รวมถึงการแสวงหาความรู้และพัฒนาตนเองหรือกระบวนกรปฏิบัติงานตาม เป้าหมายที่ยากและท้าทายชนิดที่อาจไม่เคยมีผู้ใดสามารถกระทำได้อีก		2
3	ความรับผิดชอบในงาน (Responsibility)	ความทุ่มเท รับผิดชอบ มุ่งมั่นที่จะปฏิบัติงานให้ประสบความสำเร็จอย่างมีประสิทธิภาพ คำนึงถึงความคุ้มค่าในการใช้ทรัพยากรและเป็นประโยชน์ต่อผู้รับบริการและองค์กร		2
4	การทำงานเป็นทีม (Teamwork)	ความเข้าใจในบทบาท และหน้าที่ของตนเองในฐานะที่เป็นสมาชิกหนึ่งของทีม รวมทั้งการมีส่วนร่วมในการทำงาน การแก้ไขปัญหา และการแลกเปลี่ยนประสบการณ์และความคิดเห็นต่าง ๆ กับสมาชิก ในทีม		2
5	การวางแผนการทำงานอย่างเป็นระบบ (Systematic Job Planning)	ความสามารถในการวางแผน และการวิเคราะห์ถึงปัญหาและอุปสรรคที่อาจเกิดขึ้นไว้ล่วงหน้าเสมอ รวมทั้งความสามารถในการตรวจสอบข้อมูลและรายละเอียดต่าง ๆ ทั้งของตนเองและผู้อื่นได้		2

ประเมิน ยกเลิก

Figure 4.14 The page for competency evaluation.

4.2.6 Report Evaluation

After evaluating in the Performance Agreement and the Competency, user can view report as show in figure 4.15.

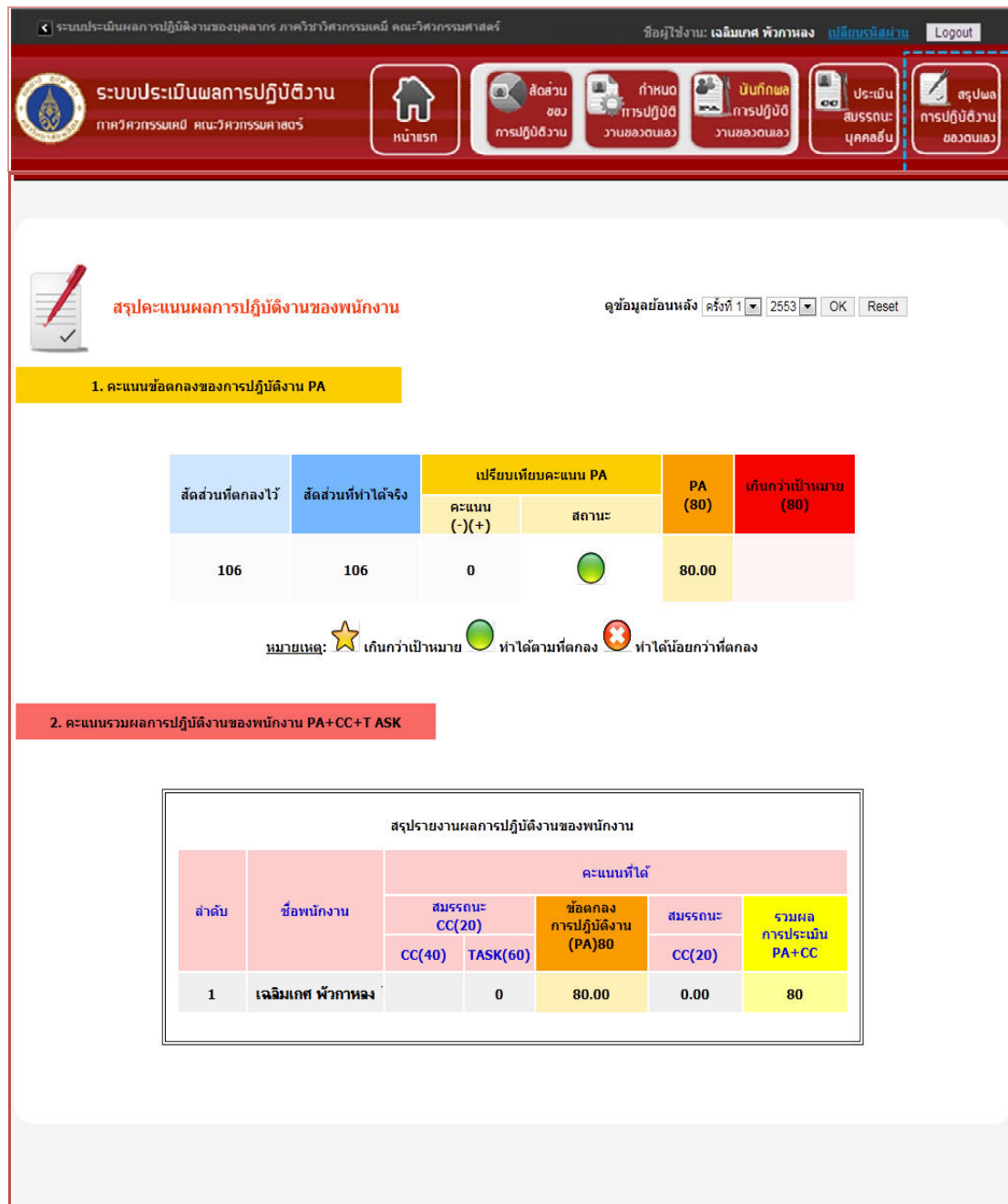


Figure 4.15 The report evaluation page.

CHAPTER V

DISCUSSIONS

According to the results, this system consists of two parts: Administration Interface shown in figure 4.1, and User interface shown in figure 4.2. The administration contains 7 menus which allow administrator to manage user profile, create new performance agreement forms, edit performance agreement and parameters, determine round evaluation, create new competency and definitions, view reports evaluation and clear data evaluations.

By create a new performance agreement form as shown in figure 4.3, the percentage of each job for the evaluation has been assigned by the staffs themselves. However, the disadvantage of doing so is that the staffs can assign the percentage under their actual performance. Therefore, the evaluation results will not present the actual performance. This system is then cannot be used for improving staff performance since it is only present the quantity of work that staffs can performed in certain period. Therefore, this system has to be used together with the core skill evaluation in order to evaluate the quality of work for each person.

The graphical reports evaluation shown in figure 4.8 may not suitable to demonstrate the all of the staff performance in one single chart since the information appeared on the chart will not fitted in one screen. Therefore, the solution of this is showed and compared the performance of staffs on limit selected staffs.

User profile menu, administrator can create and edit user profile for every user. However, due to the security aspect for this program, it is allow administrator to add, edit, or delete members from this system only. Therefore, application users cannot create new profile by themselves in order to prevent multi account from one user which may pose some difficulty to verify the user information for analysis.

The End User Portal Interface contains 6 menus which allow user to access evaluating performance agreement, determine the proportion of performance agreement, determine the pre-performance agreement, update the performance agreement and attaches documents, competency evaluation, and view reports as shown in figure 4.10.

User can update the performance agreement and attaches documents as evidence as shown in figure 4.13. However, this performance agreement evaluation is one-way process i.e. the use cannot review or edit the data in the Determine the Pre-performance agreement menu after submission since this system will automatically lock this process after data filling completion.

Performance evaluation system cannot predict the proportion of individuals in the future or next evaluation period. Therefore, each person will not have any direction to work on whether to focus on research or teaching or administrative work, etc. Thus, in order to improve the performance of the system this system should use the history of each person together with the statistic for customizes the proportion of performance agreement for individuals.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATION

6.1 Conclusions

The Performance Evaluation Web-Based Application for Department of Chemical Engineering Faculty of Engineering, Mahidol University is an easy and convenient way to conduct the evaluation procedure. This application can replace the tedious documentation works. The evaluation criteria can be assigned to the program which can be use as the general template for every member in the department. The evaluation calculation will all be done automatically and stored in the database. The data retrieval can be performed anytime via web-based application which very convenience for both evaluator and the members. The system is mainly composed of 2 parts; the Performance Agreement criteria setup by administrator and the performance agreement for users/members. The system allow every member to use the same criteria for evaluation which will post less problem compare to the performance agreement without a general guideline due to the perception different for every members. Once the guide line has been defined as the criteria of evaluation, each member can define the detail in the evaluation form personally. The administrator is then can compare or view the history of member performance.

6.2 Recommendation.

6.2.1 The evaluation results and the evaluation satisfaction

In order to improve the application, one must studies the evaluation results obtained from the real data and compared with the evaluation satisfaction from the members. This will give some parameter to fine tuning the program to be reasonable for everybody. However, one may found that the results from the study are varied in

every organization. Therefore, the functions or parameters that applied in the application for a particular organization may not be used in any organization.

6.2.2 Evaluation period

Since the application has been developed for an academic institution which there are two evaluation period in one years according to the semester as well as the fiscal year, the application develop here is designed for chemical engineering department only. However, if one want to adopt this application to be used in the different company. All parameters and setting must be changed according the evaluation scheme and the available information of the company.

6.2.3 Information security and privacy

Information security system is the most important in the evaluation system. The data and information of members are stored in the database. Therefore, the database security should be used such as https, or secure Hypertext Transfer Protocol Security for exchanging data between the server and client to maintain the confidentiality.

6.2.4 Evaluation results as a motivation tool

The performance agreement system developed here is not only a database system that can store information of all members and create the reports. This application may be used as a motivation tools if one can make use of the evaluation history and the decision support system to guide and set the score for the next evaluation or the next agreement which may pose some challenge for the members than making an agreement on what they already know what they will accomplished.

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APPENDIX

DATADictionary

The Performance Evaluation environment consists of 12 entities as follow:

Table: pa_proportion

NO	Data Element	Data Type	PK	FK	Definition
1	<u>Sideid</u>	int(11)	✓		ProportionSide
2	value1	int(11)			ProportionValue1
3	value2	int(11)			ProportionValue2
4	Side	tinyint(4)		✓	Gside of Proportion
5	Year	varchar(4)		✓	Year of Proportion
6	Times	tinyint(4)		✓	Times of Proportion
7	Uid	int(11)		✓	UserID
8	Form	int(11)			Form

Table: pa_sides

NO	Data Element	Data Type	PK	FK	Definition
1	<u>Id</u>	int(11)	✓		SidesID
2	Title	varchar(255)			SidesTitle
3	Form	int(11)			SideForm

Table: pa_publishedyear

NO	Data Element	Data Type	PK	FK	Definition
1	Times	tinyint(4)	✓		Publishedyear of Times
2	Year	varchar(4)		✓	Publishedyear of Year

Table: pa_cc_users

NO	Data Element	Data Type	PK	FK	Definition
1	<u>ccid</u>	int(11)	✓		Users Ccid
2	year	varchar(4)			Year of Evaluation
3	times	tinyint(4)			Times of Evaluation
4	p1	int(11)			assessor1
5	p2	int(11)			assessor2
6	score	int(11)			Score of Evaluation
7	status	tinyint(4)			Status?

Table: pa_competency

NO	Data Element	Data Type	PK	FK	Definition
1	<u>id</u>	int(11)	✓		ID of Competency
2	competency	varchar(255)			CompetencyDetail
3	uid	int(11)		✓	UserID
4	file	varchar(255)			CompetencyFile
5	eval	int(11)			CompetencyEval
6	description	text			CompetencyDescription
7	side	tinyint(4)			CompetencySide
8	createdon	datetime			Createdone
9	score	int(11)			Score

Table: pa_users

NO	Data Element	Data Type	PK	FK	Definition
1	<u>id</u>	int(11)	✓		Users_ID
2	name	varchar(255)			Name of users
3	username	varchar(150)			User Name
4	email	varchar(100)			E-mail
5	password	varchar(100)			Password
6	usertype	varchar(25)			Type of User
7	block	tinyint(4)			Block
8	sendEmail	tinyint(4)			Send Email
9	gid	tinyint(3)			ID of Groups
10	registerDate	datetime			Date of Register
11	lastvisitDate	datetime			Date of Last visit
12	activation	varchar(100)			Activation
13	code	varchar(20)			Code of users
14	birthday	datetime			Date of Birth
15	lovername	varchar(255)			Lover Name
16	fathername	varchar(255)			Father Name
17	mothername	varchar(255)			Mothe Name
18	typeposition	int(11)			Type position
19	position	varchar(255)			Position
20	parent	int(11)			Parent
21	appointdate	datetime			Appoint Date
22	startworkdate	datetime			Startwork Date
23	endworkdate	datetime			Endwork Date
24	params	text			Params

Table: pa_ealuate_average

NO	Data Element	Data Type	PK	FK	Definition
1	<u>id</u>	int(11)	✓		ID of Evaluate_average
2	userid	int(11)		✓	userID
3	taskid	int(11)		✓	taskID
4	year	varchar(100)			Year of Evaluation
5	ealuate_date	datetime			Date of Evaluate
6	average	double(100,2)			Average of Evaluate
7	status1	tinyint(1)			Status?
8	status2	tinyint(1)			Status?
9	status3	tinyint(1)			Status?

Table: pa_user_performance

NO	Data Element	Data Type	PK	FK	Definition
1	uid	int(11)	✓		User_performanceID
2	userid	int(11)		✓	userID
3	paid	int(11)		✓	Paid of user performance
4	side	tinyint(4)			Side of performance
5	value	int(11)			Value of performance
6	addition	text			Addition of performance
7	year	varchar(4)			Year of performance
8	times	tinyint(4)			Times of performance
9	cando	int(11)			Cando of performance

Table: pa_performance

NO	Data Element	Data Type	PK	FK	Definition
1	<u>id</u>	int(11)	✓		PerformanceID
2	title	varchar(255)			PerformanceTitle
3	number	varchar(3)			PerformanceNumber
4	unit	varchar(255)			Unit of Performance
5	uid	int(11)		✓	UserID
6	percent	double			Percent of Performance
7	times	tinyint(4)			Times of Evaluation
8	year	varchar(4)			Year of Evaluation
9	side	tinyint(4)		✓	Side
10	parent	int(4)			Parent
11	isaddition	tinyint(4)			Isaddition
12	form	int(11)			Form of Performance
13	ordering	int(11)			Ordering
14	createdon	datetime			Createdon

Table: pa_under

NO	Data Element	Data Type	PK	FK	Definition
1	<u>id</u>	int(10)	✓		UnderID
2	uid	int(11)		✓	UserID
3	unstatus	int(11)			Unstatus?
4	upstatus	int(11)			Upstatus?

Table: pa_upperestimate

NO	Data Element	Data Type	PK	FK	Definition
1	<u>upid</u>	int(11)	✓		UpperestimateID
2	unid	int(11)		✓	UnderestimateID
3	fk	int(11)			Fk
4	table	varchar(20)			UpperestimateTable
5	eval	int(11)			Eval
6	score	int(11)			Score

Table: pa_files

NO	Data Element	Data Type	PK	FK	Definition
1	<u>id</u>	int(11)	✓		FilesID
2	side	int(11)			Side of File
3	createdate	datetime			Createdate of File
4	createby	int(11)			Createby of File
5	docode	varchar(255)			Docode of File
6	docnumber	varchar(255)			Docnumber of File
7	docdate	date			Docdate of File
8	editat	varchar(255)			Editat of File
9	itemid	int(11)			Itemid
10	times	tinyint(4)			Times of File
11	year	varchar(4)			Year of File
12	title	text			Title of File
13	subtitle	text			Subtitle of File
14	description	text			Description of File
15	file	varchar(255)			File

NO	Data Element	Data Type	PK	FK	Definition
16	editdate	datetime			Editdate of File
17	editby	int(11)			Editby of File

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