

RISE model for PM training

- From Tacit Knowledge to Explicit Knowledge -

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This paper proposes the training model (RISE model) utilizing Project Manager (PM) competency framework. RISE model consists of 4 stages (Reflecting stage, Integrating stage, Setting stage and Empathizing stage). Project Managers discuss the organizationally-defined competency at the reflection stage. PM competency framework is created at the integrating stage, and recognized at the setting stage, and then permeated through the project members at the empathizing stage. The cycle of the four stages is repeated in order to improve the competency. Recently, the information system development projects have grown widespread and complicated, and the role of the PM has become more and more important. Project Managers are required to acquire the competencies that the organization desires, to act as PM. In addition, the organizations are required to define the PM competencies that the organizations desire, to continue the development of PM training. RISE model contributes to PM training conscious competencies of the required for the organization.

Key Words & Phrases: PM training, Competency, Tacit Knowledge, Explicit Knowledge

1. Introduction

In business changes rapidly, information technology (IT) must change to be aligned with the business. Within the field projects of information system development corresponding to such changes, there are reports, that the performance of the PM affects the success of project [1], and the ability of the PM affects the efficiency of project [2]. These reports indicate that the high expectation of the organizations presents on PM.

Project managers have to meet the expectations of the organization, not only have acquired the knowledge of project management, as well as the practical skills and the personal skills. If the organizations define these skills as the competency the practical skills and human skills of the PM, it helps to create the objective of the PM training and practice of projects.

In reference to the PM's competency, the framework of PM competency, PMCDF [3] (Project Manager Competency Development Framework) developed by PMI (Project Management Institute) and IPMA Competence Baseline [4] are widely known.

An example of a case that defines the competency as the organization is National Aeronautics and Space Administration (NASA) which defined the competency of the PM in the organization [5], developed training model. SECI model is Japanese knowledge creation process, and that has been utilized in human resource development [6].

However, there were few researches utilizing SECI model for PM training.

This paper introduces the effective PM training for the organization, that the explicit knowledge of the PM defined by PM competency framework. We called this PM training model RISE model.

2. The Issues of PM Training

2.1 Understanding PM Competency

The objectives of PM training are to improve their competency's level in this model.

The iceberg model of competencies is shown by Spencer and Spencer; competencies are visible such as skills and knowledge, and hidden competencies such as self-image, traits and motives [7]. PM both hidden and visible competencies are needed to make an effective PM.

2.2 Defining PM Competency for the Organization

PM competencies should be defined by the PM for the organization. As a result, the PM can understand the difference between his or her competency and the competency is regarded by the organization. PMCDF, based on the principle of knowledge competence [8], has defined the type of performance criteria and evidence about personal and performance competence.

The IPMA competence baseline comprehensively explains PM competence for managing projects, programs and portfolios. In this, there are contextual competencies, behavioral

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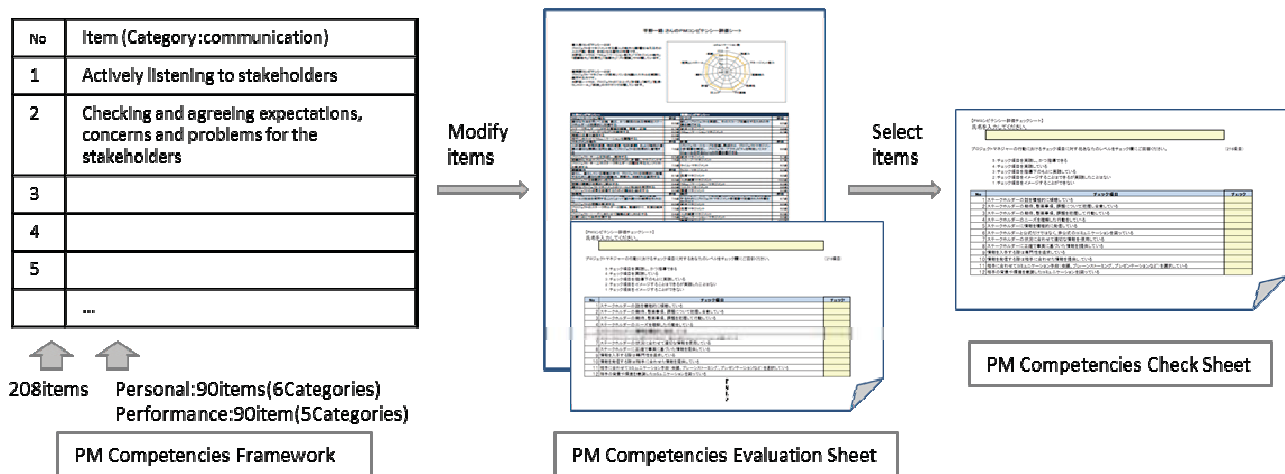


Figure 1 Tools for PM Training

competencies and technical competencies.

NASA's definition of the competencies for program managers, project managers and system engineers is useful, because it is derived its requirements from extensive interviews with highly successful NASA project managers.

2.3 Creating Training Model for PM

There is a spiral of knowledge involved in SECI model, where the explicit and tacit knowledge interact with each other in 4 modes such as socialization, externalization, combination, and internalization.

SECI model helps to be grown the PM organizational and continuously, improve the PM and the organization.

During the socialization, it is necessary to practice the project, and to acquire PM competencies. During the externalization, it is necessary to discuss to acquire competencies. During the combination, it is necessary to define the competencies like NASA. Finally, during the internalization, it is necessary to spread these defining competencies through the organization in order to improve companywide competencies. The cycle of the four stages is useful in order to grow the PM as the organization requires.

3. Training Model Understanding PM Competency

3.1 Three Tools for Understanding PM Competency

PM competency framework, PM competency evaluation sheet and PM competency check sheet in order to define PM competency, were developed.

PM competency framework was developed by collectively PM behavior with reference to PMCDF

[7]. Furthermore, PM competency evaluation sheet and PM competency check sheet, based on PM competency framework, were developed for PM training (Figure 1). PM competency framework has 208 items that are required by PM of information system development. IT included 118 items for practical competencies, and 90 items for personal competencies.

PM competency evaluation sheet was created to evaluate the competencies of the PM. In this sheet, the items each of the competencies was changed question the format. The answers of the competency evaluation sheet are aggregated for each category.

PM competency check sheet is utilized when themes are decided at the workshops. PM competency check sheet is created by selecting the items required from the PM competency evaluation sheet. Because PM competency check sheet has few check items, the load for answers of the participants is reduced.

3.2 The RISE Model for PM Training

The RISE model is the training model for the PM which is utilized PM competency framework (Figure 2). This model consists of 4 stages (Reflecting stage, Integrating stage, Setting stage and Empathizing stage). The organizations are grown the PM by this model, converting the tacit knowledge to explicit knowledge.

(1) Reflecting stage

During reflecting stage, PM understands his or her competency, utilizing PM competency evaluation sheet or PM competency check sheet. For example, in the workshops, the PM discusses and shares their experiences each other. Then, the PM not only gets an

idea of PM competency acquisition, but also reflects the behavior as the PM.

(2) Integrating stage

During integrating stage, experienced project managers create a PM competency framework. In PM competency framework, the competencies of superior PM are visualized, and are integrated. Then, PM competency framework will be continuously updated.

(3) Setting stage

During setting stage, the PM competency framework is shared in the organization. By confirming throughout PM competency framework, the PM recognizes PM competencies desired the organization.

(4) Empathizing stage

During empathizing stage, the PM is permeated PM competency framework in the actual projects. Project members accept PM competency framework. Then, they acquire the desired behavior of the PM as experiences in practicing the project or on the job training (OJT). By practicing PM competency framework, their competencies as the PM should be able to improve, according to the way in effective and efficient.

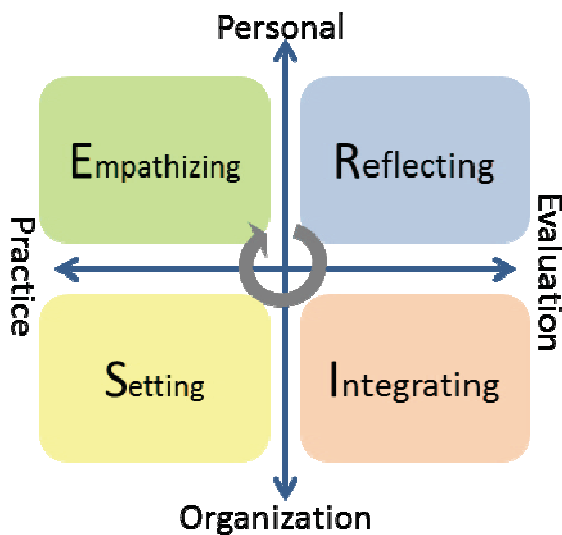


Figure 2 RISE Model

4. PM training utilizing PM Competency Framework

4.1 Creating PM Competency Framework

In 2013, 6 working students with PM experience from Advanced Institute of Industrial Technology (AIIT) developed PM competency framework for information system development. PM competency framework is developed to discuss the behavior which

should be shown by the PM. Tacit knowledge of the PM is converted into explicit knowledge through the discussion.

4.2 Utilizing at PBL

PM competency evaluation sheet was utilized in project based learning (PBL) of AIIT in 2014. PM competency evaluation sheet at the start and the end of PBL helped to confirm the increase of PM competency acquired by the PBL. In the case of PBL, the examples that two students confirmed own competencies are as follows.

The working student who has participated as the PM could confirm to improve the balance of competencies (Figure 3). The student compared with other students in PBL, and understood project management. Then The Student realized the over-estimated competencies before PBL (Figure 4).



Figure 3 The Competencies of Working Student



Figure 4 The Competencies of Student

4.3 Utilizing at Workshop

Through the interaction at the workshop, participants could share the experience as the PM, and reflected the behavior as the PM, and it is one of the effective training for the PM [10]. In the AIIT

workshop (Table 1), PM competency evaluation sheet was utilized. Prior to this workshop, the participants answered PM competency evaluation sheet. Then, the facilitator reviewed PM competency evaluation sheets. The effects are as follows;

- In the workshops, the facilitator can consult grouping from the evaluation results.
- Facilitators can consult the workshops progress.
- The participants can try to improve in the workshop, because they have understood their own PM competency before the workshop.

Table 1 Questionnaire Results

	Very Good	Good	Neutral	Bad	Very Bad
Satisfaction	5	3	0	0	0
Intelligibility	3	5	0	0	0

5. Conclusions

Business changes rapidly, the demands of the organization of the PM have been changing. And, PM competencies that the organization requires have been changing.

PM competency frameworks served as the discussion by the PM, it can continue only to be updated by the discussion of the PM. PM competency frameworks help to be the indicator of PM competency, and PM training conscious competency.

RISE model is the practice model for continuing to grow as the PM in the organization.

It is the issue that this model has been practiced only in the graduate school. This model will be practiced in the company.

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