

Personality of Organizational Employees towards the Operational Performance of the modern business world

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Abstract

This research was quantitative research to study the personality, nature of the organization, years of work, and educational level affecting work efficiency for the benefits of the organization's human resource management policy development. The data were collected from multinational companies having branches established in Thailand. A total of 1,451 questionnaires were returned using artificial neural network analysis. The research result revealed that conscious personality was most important resulting in employees doing their best at work. This was followed by open personality and length of work in the organization. As other variables affected the performance slightly, it was important to study the personality patterns of employees in the current organization in order to know what kind of personality they were in order to cultivate responsibility and creativity for personnel by further training and development.

Keywords: Personality, Employees, Operational Performance, Efficiency

Introduction

Today is the era of free trade and human capital more than ever (Mihardjo, Jermittiparsert, Ahmed, Chankoson, & Iqbal Hussain, 2020). Especially in human resource management, human resources are important because the ability of people has no boundaries depending on many factors. Human capital is a very valuable resource for both private and government organizations to recruit talented people. Maintaining human resources in the organization and having personnel who are constantly developing themselves can turn the organization to become a learning organization (Went, 2002). If any organization has effective human resources, it will result in the organization's success. One of the key factors is

the personality that enable an individual to succeed in their career which is an important goal of the organization (Seibert & Kraimer, 2001). However, today's career path is more complex. Organizations assign more tasks to employees but use fewer personnel (Hall, 1996; Hall & Mirvis, 1995).

There are not many researches on personality as it can be changed (Sackett, Gruys, & Ellingson, 1998; Ferris & Judge, 1991). Mostly, the studies are in the concept of organizational behavior in the leadership. The most important dependent variables are work efficiency (Barrick & Mount, 1991) and job satisfaction (Judge, Locke, Durham & Kluger, 1998; Jermittiparsert & Urairak, 2019).

However, there are few researches looking into how personality affects employee productivity which is primarily a result of personality (Judge, Higgins, Thoresen, & Barrick, 1999). It can be said that if the organizations have the personnel selection system with good training and development, these people will be valuable human resources and will retain with the organizations for a long time as they are physically and mentally attached to the organizations. They are happy to work in the organizations. In addition, personality types of employees in an organization are likely to affect work efficiency, stress, job satisfaction, and

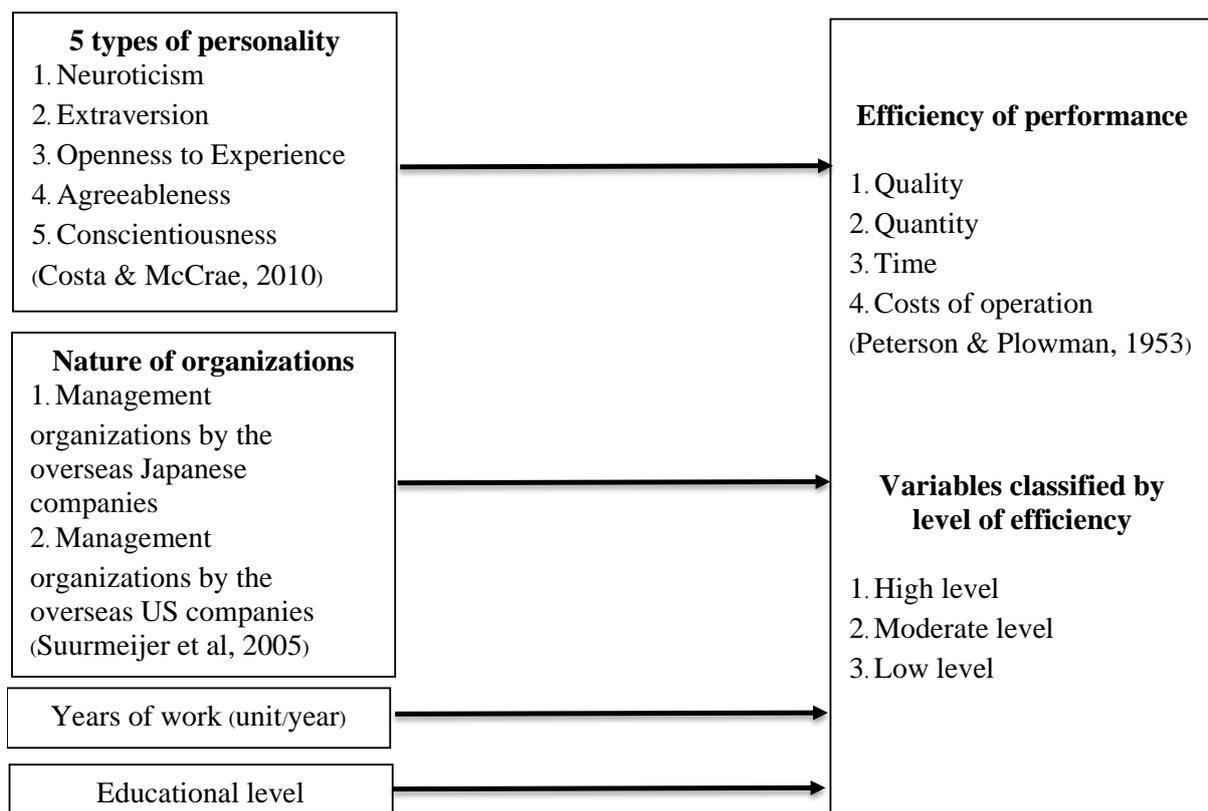
illness more than any other factors (Jarinto, 2011).

This was quantitative research to study the personality, nature of the organization, years of work, and educational level affecting work efficiency for the benefits of the organization's human resource management policy development.

Research objective

To study the personality affecting work efficiency of the employees for the employees to promote the organizational development.

Research conceptual framework



Concepts and theories

1.) Five elements of personality

Personality means individual characteristics in various fields both appearing outside and inside. This personality can be

adjusted according to learning and environment.

McCrae & Costa (1989) joined in studying the concepts and theories of Eysenck (1970) dividing the groups of personality into 2

groups; Introverted – Extroverted and Neuroticism – Stability. Later in 1975, Eysenck proposed one kind of personality called “Psychoticism”. Persons with this personality tend to be selfish, aggressive, cold, and less considerate. McCrae & Costa considered Eysenck’s theory together with the concept of five elements of personality (Norman, 1963) and develop into the five elements of personality. At first, the personality that characterize individuals according to their concepts consisted of only three components; Neuroticism, Extraversion, and Openness to Experience. Later, as they are very similar to the five elements of personality, two more elements, namely Agreeableness and Conscientiousness are added until eventually becoming the five elements of personality. The details are as follows.

1. Extraversion means being warm, cohabitation with others, straightforward expression, love activity, thrill-seeking, having a positive mood. The characteristics of people with high personality scores are those who are friendly and easy to get to know, like to socialize, like to be outgoing, to be a leader, to do activities with enthusiasm. They are optimistic. Those with low scores were the persons who have conservative, ceremonial nature, do not like to socialize, unhurriedly conducting the activity.

2. Agreeableness means being a person who trusts others with honesty, to feel generous, tolerance, politeness, and meekness which are characteristics of those who score high in this aspect of being honest, straightforward, well-intentioned, sincere, willing to help others, compromise, courteous, tender-hearted, ready to change. As for those with low scores in this aspect of personality, they are cynical cautious exaggerate unwilling to help others aggressive, competitive feel that one is superior to others and stick to reason.

3. Conscientiousness means having the ability, orderliness, taking responsibility, needing for achievement, self-discipline and ideas used in practice. Characteristics of people with high personality scores is someone who has the ability and efficiency orderly, with a sense of responsibility. There is an effort to achieve the goal focusing on completing tasks and thinking carefully before implementing. People with low scores of this personality is someone who is often unprepared disorganized Procrastinate, be distracted, and act without reflection.

4. Emotional Stability refers to those who are calm-loving, slow anger, difficult to discourage, rarely feel uncomfortable with external stimuli, resistant to stimuli, and coping well with stress. They have firmness in decision making. People with low personality scores in this aspect is an anxious person easy to get angry, easily discouraged, self-respect, have a strong urge and has a fragile temper.

5. Openness to experience means being a dreamer, appreciating beauty, revealing, feeling, having an idea and accepting values. Characteristics of people with high personality scores is someone who has an imaginary nature. The dreamer appreciates the beauty of art. They see the value of different emotion. They like variety, try new things, are rational with a broad perspective, and are ready to examine various values. For those who score this aspect of personality low, they are those who have characteristic that gives importance to the present uninterested in art, neglectful, uninterested in feelings, prefers to do habitual, emphasizes understanding of reason from a narrow perspective and does not accept new values.

There are five levels of personality in a person. Rather, there are different levels of personality in each type (Digman, 1997), which is a suitable instrument for measuring personality and productivity (Jang et al., 1998).

2.) Efficiency in working

For the elements and assessment of Performance, Petersen and Plowman (1953) gave the concept of work efficiency. The 4 components of efficiency are summarized below:

1) Quality of work means that the work must be of high quality. The producers (employees or organizations) and the recipients (customers) must obtain the worthy and satisfaction benefits. The work performance must be accurate, standardized, fast, and bring benefits to the organization as well as creating the satisfaction for customers or those who receive services.

2) Quantity of work means the work that occurs must meet the goals of the agency. The performed work must have an appropriate volume of work according to the planned work plan or the goals set by the organization. There should be a time limit or a time management plan to achieve the workload according to the goals that have been set. The output must be balanced with the rate of manpower in the agency.

3) Time spent on the work means the time required for the operation. It must be determined appropriately according to the nature of the work. The work techniques have been developed to be more convenient and faster. The work is done as scheduled compared to the difficulty of the work. It takes less time to work and the deliveries are on schedule. The employees can work accurately and quickly.

4) Cost means the cost of all operations which must be appropriate for the job at the least investment, the most profitable and efficiency in terms of expenses or costs. It is the most economical and cost-effective use of human, material, technological and financial resources. It is planned before the start of work in order to eliminate duplication and reduce the production cost. The knowledge from training

in the work is applied for the maximum benefits and cooperates in saving resources.

Related literature

Previous researches pointed out the relationship between personality and work efficiency in a Thai context. For example, Kritsada Chienwattanasuk (2020) studied the causal effects of transformational leadership and personality on efficiency of the teamwork: Empirical evidence from a company in the automotive parts manufacturing industry. The objective was to study leadership changes that affected team performance and to study the personality that affected the efficiency of the teamwork. The sample group consisted of 400 employees of a company in the automotive parts manufacturing industry. The research instrument was hierarchical sampling questionnaire. The results showed that transformational leadership and personality were Extraversion, Openness to experience, Agreeableness, and Conscientiousness affecting the efficiency of the team of employees in the automotive parts manufacturing industry. The statistical significance of 0.05 had 47% predictive power.

For the issue of international business administration, Thailand has a very low cost of skilled labor compared to other countries in the world. There are also various forms of investment assistance. The government made Thailand a target for foreign companies to invest heavily, especially American and Japanese companies that are considered models of developed countries in the world. However, these foreign companies will establish branches or subsidiaries in Thailand to produce products and sell them around the world. American corporate management is characterized by short-term employment with frequent job changes. There is a rapid evaluation of the promotion. Having a clear career path, observing rules, regulations, and controlling

mechanisms openly, the emphasis is on personal responsibility, decision-making, and equality. As for Japanese management, it is characterized by lifelong employment. There is a gradual evaluation and promotion. Career paths may not match what people have studied. They adhere to the senior system with the emphasis on decision-making and shared responsibility. It is very attached to the organization (Ouchi, William T., 1981). However, there has been the combination of management that brings advantages in management in its own way to adapt to the personality and culture of Thai people. It is more appropriate to use one form because their administration is only appropriate when being used in their own country.

Research methodology

This research collected quantitative data by using a questionnaire as an instrument to study the companies of American and Japanese multinational companies that have branches in Thailand. The selected companies were from several industrial groups. The persons who could answer the questions must have worked in the companies for at least one year as the full-time employees.

In this research, the researchers chose to use Artificial Neural Networks (ANN) analysis which would be able to fully answer the objectives and to optimize the forecasting of correlation analysis. The multiple regression analysis could only be analyzed with straight line equations. More importantly, the above method could not learn the data that was in the time series format. Therefore, it could not be used effectively because Artificial Neural Networks did not pay attention to how the data was distributed. The highlight of this technique was that it could be used with complex tasks or did not have a clear correlation model that could be accurately forecasted. It had the ability to

learn and to be used for forecasting relationships both linear and nonlinear (Nantachai Kantananda, 2012).

Research Instrument

The questionnaire was divided into 3 parts:

Part 1: There were 5 questions about demographic information of the respondents including gender, company type, working age in the company, position level in the organization, and education level,

Part 2: There were 11 questions to measure the level of opinions about the performance data. The 5 levels of Likert's Scale were used including 1.) 3 items for quality of work, 2.) 3 items for quantity, 3.) 3 items for Time, 4.) 2 items for costs of operation.

Part 3: Personality assessment form or Big 5 personality model consisted of 15 questions divided into 5 dimensions; Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness

Validity and Reliability of instrument

The validity test was performed using the Index of item objective congruence (IOC) coefficient method from 3 experts. All questions had an IOC value greater than 0.5 (Rovinelli & Hambleton, 1977) and the Reliability was tested. The researchers took the questionnaire that had been created and modified to be tested (Pretest) for 30 sets to check whether the questions could convey meaning according to the needs as well as appropriate or not, how difficult it was. The questionnaire reliability was then tested by using the ready-made program and the Alpha Coefficient. The total Cronbach's Alpha value should exceed 0.70

(Cronbach, 1951; Nunnally, 1978). In this study, Cronbach's Alpha was 0.806.

Sample group

The sample group consisted of the employees in multinational companies that have branches in Thailand and must be companies in the manufacturing industry. It is an unknown sample of the exact number because there is no statistical data collected yet. Therefore, the number of samples was referred to be calculated from the formula of unknown sample size of WG Cochran. The reliability level was determined at 95% and the error level was determined at 5% (Kalaya Wanichbuncha, 2011). The total sample size of 385 people was obtained. However, in order to process, it was highly reliable and prevented errors from answering incomplete surveys. Thus, the sample group was added and backed up with an additional 1,066 questionnaires for a total of 1,451 questionnaires, requiring sufficient data storage.

Sampling Method

Multistage sampling in this study is a multistage sampling process as follows:

1st Step: Purposive sampling was used by the researchers to select companies located in various industrial estates which were multinational companies only. Each company must have more than 500 employees.

2nd Step: Proportion sampling was used whereby the researchers would bring the questionnaires to the HR department to distribute. The sample would be divided by departments or sections in the organizations. The distribution would receive the large return if the department or section was largely populated. However, less questionnaires would be collected less if the department or section had small population.

3rd Step: Convenience sampling was used where the respondents were willing to cooperate or could be chosen at the convenience of the researchers.

Research results

Data analysis results

Part 1 Analyze demographic data and descriptive statistics of the samples to know the basic characteristics of the samples with frequency, percentage, mean, standard deviation, skewness, and kurtosis.

Table 1 presented the frequency and percentage of demographic characteristics of the samples of employees in the organizations classified by gender, age, marital status, educational level, occupation and monthly income.

Demographic characteristics	Frequency and percentage	(%)
Gender		
Male	709	(48.9%)
Female	742	(51.1%)
Type of multinational companies		
US	550	(37.9%)

Japanese	901	(62.1%)
Level in the organization		
Operation	1225	(84.4%)
Management	226	(15.6%)
Educational level		
Lower than Bachelor's degree	371	(25.6%)
Bachelor's degree	940	(64.7%)
Master degree	122	(8.4%)
Doctoral degree	1	(0.1%)
Others	17	(1.2%)
Level of efficiency in working		
Low efficiency	217	(15.0%)
Moderate efficiency	1081	(74.5%)
High efficiency	153	(10.5%)
Total	1451	(100%)

From the table, most of the samples were female accounting for 51.1% and 48.9% males were of similar size. There were almost double the number of employees in Japanese companies than those in American companies, accounting for 62.1% and 37.9%. Most of them were at the operational level accounting for 84.4% and the administrative level accounting for 15.6%. When considering the level of

education, it was found that the majority of the respondents had bachelor's degree, accounting for 64.7% and 25.6% was lower than bachelor's degree which was the majority of the sample group of this research. The efficiency was divided into 3 groups; high efficiency for 10.5%, moderate for 74.5%, and low for 15.0%. The Empirical rule was applied to classify the variables.

Table 2 presented the Mean, standard deviation (SD), Skewness, and Kurtosis

Quantitative variables	Mean	SD	SK	KUR
Variables of personality				
1. Extraversion	9.99	2.09	-0.05	0.37

2. Agreeableness	9.84	1.81	-0.32	0.29
3. Conscientiousness	11.22	2.43	-0.73	0.36
4. Emotional Stability	9.98	1.82	0.02	0.15
5. Openness to experience	7.68	2.46	0.43	0.11

* The minimum value was 1 while the maximum value was 15.

Variables of efficiency in working

1. Quality	3.28	0.69	0.04	0.02
2. Quantity	3.26	0.69	-0.12	0.32
3. Time	3.46	0.74	0.04	2.75
4. Cost	3.40	0.71	-0.13	-0.05

* The minimum value was 1 while the maximum value was 5.

Variables of working age in the organization	5.19	4.45	2.27	10.08
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From the table, it was found that the Conscientiousness had the highest mean. The Extraversion, Emotional stability, and Agreeableness were approximately the same. The Openness to experience had the lowest mean. As for the work efficiency, it was found that the variables had very close mean. The time spent on working had the highest mean

followed by the cost, the quantity and the quality of work, respectively.

Part 2 Analysis results to test personality hypotheses and demographic characteristics affecting work efficiency of employees in multinational companies by Artificial Neural Network analysis

Table 3 Number, Percentage and Predictions of the Samples

Sample	Number	Percentage	Percent Incorrect Predictions	Percent Correct Predictions
Training	727	50.1	25.2	74.8
Testing	437	30.1	25.5	74.5
Holdout	287	19.8	23.7	76.3
Total	1451	100.00		

From Table 3, it showed that the results of the Artificial Neural Network analysis used 727 learning samples, representing 50% with the correct prediction accounting for 74.8%. The test sample value of 437 samples represented 30%.

The prediction was correct accounting for 74.5% and the data stored for testing the model to test the accuracy of 287 samples received the correct prediction accounting for 76.3%.

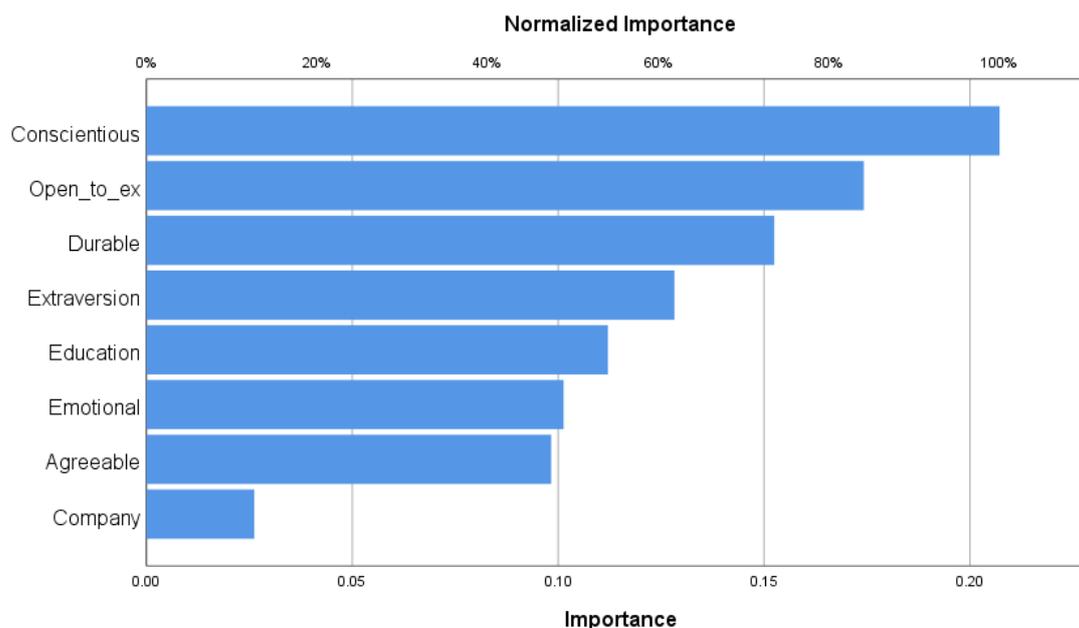
Table 4 Personality and demographic characteristics affecting work performance of employees in multinational companies

Input Layer 8 Factors 12 Units	Independent Variable Importance		Hidden Layer	Output Layer
	Importance	Normalized Importance (%)		
	Type of organization (Type)	0.026		
Education (EDU)	0.112	54.1	Hidden Layer	Dependent
Extraversion (EXTRA)	0.128	61.9	7	Variables
Agreeableness (AGREE)	0.098	47.4	Units	
Conscientiousness (CONSCIENCE)	0.207	100.0		3
Emotional Stability (EMO)	0.101	48.9		Units
Openness to experience (OPEN)	0.174	84.1		
Work period in the organization	0.152	73.6		

Table 4 showed the data of the appropriate Artificial Neural Network structure which was the hidden layer in a total input layer of 8 factors, 12 units. The Hidden Layer had a layer of 1 hidden layer of 7 units. The Output Layer had 1 variable of 3 units including the high, medium and low efficiency without prioritizing variables in the descending order. The results

showed the weight of the underlying variables affecting the dependent variables. It was found that the Conscientiousness was the most important for the employees to have better work efficiency. This was followed by Openness to experience and work period in the organization. Other variables affected the efficiency quite slightly (below 70%).

Figure 1 showed the priorities of personality and demographic variables that affect performance of work in graph form



The results of Figure 1 showed the order of all independent variables affecting the dependent variables by weight represented by the Bar Chart, from the largest to the smallest in percentage which corresponded to Table 4.

Discussion of results

1. From this research, it was found that the Conscientiousness affected the efficiency highest when compared to other variables. In the actual work, the person with Dutifulness, Logical, Competence, Reasonable, Aptitude, Visionary, and Deliberation will be a person searched by various organizations. They are very few and it can be predicted that they will be able to work in the organization very well. It corresponded with the book *The 7 Habits of Highly Effective People* (Stephen R. Covey, 2020) on the habits that make high-performing people. In Habit No. 1, Be Proactive means focusing on prevention rather than resolving later. It is good to be far-sighted and responsive. It is also consistent with Habit No. 2, Begin With the End in Mind, which means looking at a practical approach to the goal. Habit

No. 3, Put First Things First, means having a plan in good order.

2. There is also Openness to Experience which will affect work efficiency highly. This personality type is a person who has Fantasy, focuses on actions, has strange ideas, and always has creative ideas for the organization. People with this personality type will bring new ideas, improve and change the organization to learn and grow continuously. It is consistent with the book *Human Resource Management* (Noe, Hollenbeck, Gerhart and Wright, 2017). There is a need for a product that is different from the general merchandise in the market. Thus, the companies need creative people who like change and do not adhere to the same old culture enterprising to create different products.

3. Work experience is another important variable that affects work efficiency. It shows that the expertise that is nurtured through the working time will enable the personnel in the organization to acquire knowledge in solving complex problems. Maturity and understanding of people management thus cause the work to be less

wasted utilizing low resources and achieving goals. This is consistent with Albert Bandura (1986) who said that human learning comes from interaction among people under the environment. It causes learning to be able to recognize the model and express it for use in working to solve problems.

4. When comparing the characteristics of the organization (American and Japanese nations), it can be seen that there is no difference in the organizational characteristics affecting the efficiency of the work of personnel. In the current era, organizational management is characterized by a combination of organizational strategies that are in the form of Transnational Strategy. It agrees with Griffin and Pustay (2015) stating that corporate strategy will no longer be classified as a global strategy or a multidomestic strategy. It will become Transnational Organization with high flexibility and homogeneity in management until it can no longer distinguish the management of each country that affects the efficiency of employees.

Implementation

1. Organizational recruiting is essential to assess personnel with the applied Jung's standardized assessment form (Jung, 1939) in Big 5 personality model to have Conscientiousness and Openness to Experience. These personality types are the attributes that organizations seek and can predict to work effectively. It also affects the success in the Career Path of that employee and ultimately the organization.

2. The study of personality patterns of employees in the current organization is for knowing that they are a person with a personality type and can cultivate responsibility and creativity for personnel by further training and development. It is recognized that although personality is an inherent part of socialization

from the environment and experience, it can be adjusted.

3. Cultivating the new generation of employees to gain knowledge by using the strategy of Coaching or Mentoring from highly experienced people will give rewards (such as valuable personnel awards) to those who transfer the management, problem solving, and new concepts. The organizational knowledge can be lost if not preserved and it will save learning time for new employees.

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