

The Construction of Human Resources Performance Management System in Polytechnic Universities: A Perspective of Competency Model—Taking University A as an Example

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Abstract: The competency model is an important tool of improving organizational performance management and will become an important task of human resources performance management. Currently, many college and universities still prefer results-oriented performance management, ignoring the emphasis on ability and its training, in particular most polytechnic universities focus on the achievements of projects and patents as the standard of performance. The author clarifies the relationship between competency and performance management in this paper, and makes a classification of management positions in University A on the basis of its actual situation. With administrative staffs from 31 institutes and schools of University A as the research object, in combination with assessment center method, questionnaire survey, analytic hierarchy process and other methods, the author constructs the competency model of human resources performance management system in University A and analyzes the practical application of the competency model in human resource performance management.

Keywords: Competency model, performance management, polytechnic universities.

In the 1970s, the famous American psychologist McClelland put forward the competency theory for the first time. The competence theory explores the human resource management of enterprises from a new perspective, and quickly becomes a focus in the research field of human resource performance management. But currently, many colleges and universities still prefer results-oriented performance management, ignoring the emphasis on ability and its training, in particular most polytechnic universities focus on the achievements of projects and patents as the standard of performance. This paper makes a study of the scientific research management personnel from 31 institutes and schools of University A from the perspective of the competency model and builds the human resources performance management system of polytechnic universities.

1. COMPETENCY AND PERFORMANCE MANAGEMENT OF HUMAN RESOURCES

1.1. The Connotation of Competency

Since McClelland put forward the concept of "competency", more and more scholars have turned their research attention to the competency and their researches mainly focus on the definition, classification and model building of competency. Scholars have made many discussions on individual competency and reached a common understanding that competency is the ability and characteristic of individual condition and behavior to directly affect their performance in

work, it is not apparent, but a deep inner characteristic which can distinguish an excellent staff from a common one. Competency includes personality traits, motivation, self image, values, social role, and professional knowledge or skills in some areas as well as other individual characteristics that can be reliably measured or counted and it can significantly differentiate excellent ones from ordinary persons.

1.2. Relationship between Competency and Performance

1.2.1. The Performance Characteristics of the Concept of Competency

Scholars at home and abroad have carried on a lot of researches on the relationship between competency and individual performance, competency and organization performance, competency and organizational management from many different angles. Spencer proposed that to evaluate the personal competency is to improve the performance of organization as the competency evaluation can affect the organization performance in many respects. In terms of performance, competency generally refers to some individual characteristics which can help one to get excellent performance on the job. These characteristics can be measured in an objective manner, mainly refer to the knowledge, ability and work performance to complete job performance targets and fit the job requirements, as well as some other behavior characteristics which can predict and make impact on work performance. Therefore, the characteristics of the competency structure mainly include the following four aspects: behavior characteristics, working conditions, and procedure orientation and performance association.

1.2.2. The Competency is Closely Related to Job Performance

The study found that the competency and job performance of human resource is closely related. In general, competency is characterized in the following three aspects within the scope of the study of human resources management: first, the competency is closely associated with job performance and can be predicted through the work performance of individual employees; second, the competency is also related to task situation and is dynamic, varying with different conditions; third, the competency is distinguishable and is conducive to differentiate employees with excellent performance from those with poor performance. Competency is recognized only when it conforms to the characteristics of these three aspects. On the one hand, competency can be used to predict the future job performance of employees; on the other hand, as an indicator, it can be involved into the assessment system of the employee's performance.

1.2.3. The Performance Relationship of Competency Characteristics

In order to build and improve organizational core competency of the performance, we need integrate the employee's individual different resources, such as motivation, cooperation, knowledge, skills and organizational strategic objectives into the organization's competence. In the process, we also should combine the organization's key success factors to further divert the focal point of the human resource management from organizational level to employees as individual, and from whether employees can adapt to the requirements of work to giving full play to the potential of employees. Modern performance management of human resources should be built on employees' competency performance, make organization competency get promoted and create a higher job performance, which have realized high performance of the competency of human resource management. At the same time, it is proved that there are inherent and intrinsic relations of performance between the competency and human resources.

2. THE CONSTRUCTION OF HUMAN RESOURCES COMPETENCY MODEL AT UNIVERSITY A

2.1. Details of Building the Human Resources Competency Model at University A

2.1.1. Position Classification and Rank

Job analysis is the first task of carrying out human resources work, and also the first basic work to construct the competency model. The management posts of all institutes and schools at University A are mainly functional system. Different posts are set up according to the different services and then are ranked according to their importance and responsibility. Different job posts have different competency requirements varying with their categories and levels and need to be updated and improved according to specific situations.

2.1.2. Methods and Settings

This paper mainly employs the assessment center method, the panel discussion method and the investigation

method to build the competency model of University A. It first makes communication and discussion from different levels to get needed information, and then builds up the competency model after summarizing and analyzing, at the same time, puts the competency model into the practical work for verification to further revise it.

The specific steps are as follows:

First, we analyze the management positions according to the development plan of all schools of University A, and determine the influence factors of the working performance such as managers' knowledge, ability, skills, motivation and other factors to further ascertain the key factors of assessment indexes.

Second, we make a classification of jobs and select samples to study, collect data and do statistical analysis to achieve competency index and grade at a different level and then determine the evaluation index and scoring standard.

Third, we should determine the weight of each index.

Fourth, we give a score of the college managers' performance by way of daily observations and scenario simulations, and make the distribution table of the evaluation score, and then compare the actual score and score distribution list at the same time to modify the evaluation index and scoring standard in a timely manner.

Fifth, we take the competency evaluation index system into the practice of human resource performance management, and finally set up and improve the human resource performance management system based on the competency model.

2.2. The Competency Model Construction of Human Resources Performance Management System at University A

Combined with domestic and foreign scholars' research on competency elements and the actual situation of management positions of all schools of University A, this paper puts forward six competency dimensions and nineteen elements in order to build the competency model of management personnel at University A (Table 1).

2.3. The Validity and Reliability Analysis

With the managerial personnel from 31 colleges of University A as the research object of the questionnaire, the paper makes the score of the importance of each element in the competency model by the five-point Likert scale. A total of 62 questionnaires were issued, 58 were returned, and the number of effective returned questionnaires was 54. According to the survey data, we made an analysis of the reliability and validity.

2.3.1. Validity Analysis

This paper uses SPSS 19.0 software for data processing. The first is factor analysis to verify the validity of theoretical construct. Before the factor analysis, we make the KMO and Bartlett spherical test to determine whether the factor analysis can be carried out.

Table 1. Competency elements of management personnel at college B of university A.

The Dimensions	Competency Elements	Behaviors
Leadership	Boost the morale of the team	Fully arouse the work enthusiasm of subordinates, and let every staff clearly know their department responsibilities, and define their own goals to have a high level of organizational commitment
	Distinct rewards and punishment	Make a clear allocation of responsibilities in order that leaders and their subordinates are able to take responsibility for their own work and behavior, and give appropriate rewards and punishments according to their work performance
	A harmonious working atmosphere	The goals of the team members are consistent; their work content doesn't conflict with each other. They can help each other and settle disputes in a timely manner.
	Build the team vision	Put forward the team's vision on the basis of college development plan, and make sure all team members believe in this vision.
Communication Ability	Work out a comprehensible work plan	Make reasonable decomposition of team work according to the arrangement of college work, and carry out a detailed and comprehensible work plan on the basis of the team development
	Communicate in a timely manner	Keep regular communication with work colleagues, and keep in touch with the service object of the department or team to understand their needs and satisfaction in a timely manner.
	Concise language expression	In the process of communication, accurately convey information with clear thinking and concise language
Interpersonal relationships	Good rapport	Get on well with your colleagues in your work and help each other; timely understand and meet the demands of the service subject and listen to their reasonable advice.
	Listen to different opinions	Listen to different opinions from the others including subordinates
	No bad habits	Be law-abiding and have the public spirit and be full of love.
Planning ability	Combining with college strategy to make a work plan	Know the development plan of the college in a timely manner, and break it down to their own department and team so that their work can serve better for the college development
	A feasible work plan	The work plan not only meets the needs of college development, also gives full consideration to the actual situation of the work team at the same time, making it become a feasible work plan.
	Make an accurate judgment of the external environment	Timely pay attention to the policies of Ministry of Education, Ministry of Science and Technology and other related departments, as well as the adjustment of tasks of the superior, and make accurate judgment of the recent policy changes and work dynamic
Professional ability	Focus on development trend	Positive attention related disciplines in colleges and universities at home and abroad in the field of development, understand the latest cutting edge
	Manage knowledge and skills	Understand and master the relevant knowledge of the department management business, timely know the current policies of the State, ministries and provinces and cities
	Transfer knowledge into practice	Be able to master all kinds of disciplines and management knowledge and apply them into daily management
Problem solving skills	Anticipation ability	Combine the external environment with the gained knowledge, grasp all sorts of possible problems in the work timely and even ahead of time
	Analysis ability	When problems arise, timely and accurately find the root cause
	Propose solutions	Make timely response to the problems, work out appropriate contingency plans and solutions

Table 2. KMO and Bartlett's check list.

The Kaiser-Meyer-Olkin Measurement		.732
the spherical test of Bartlett	The approximate chi-square	723.96
	Df	103
	Sig.	016

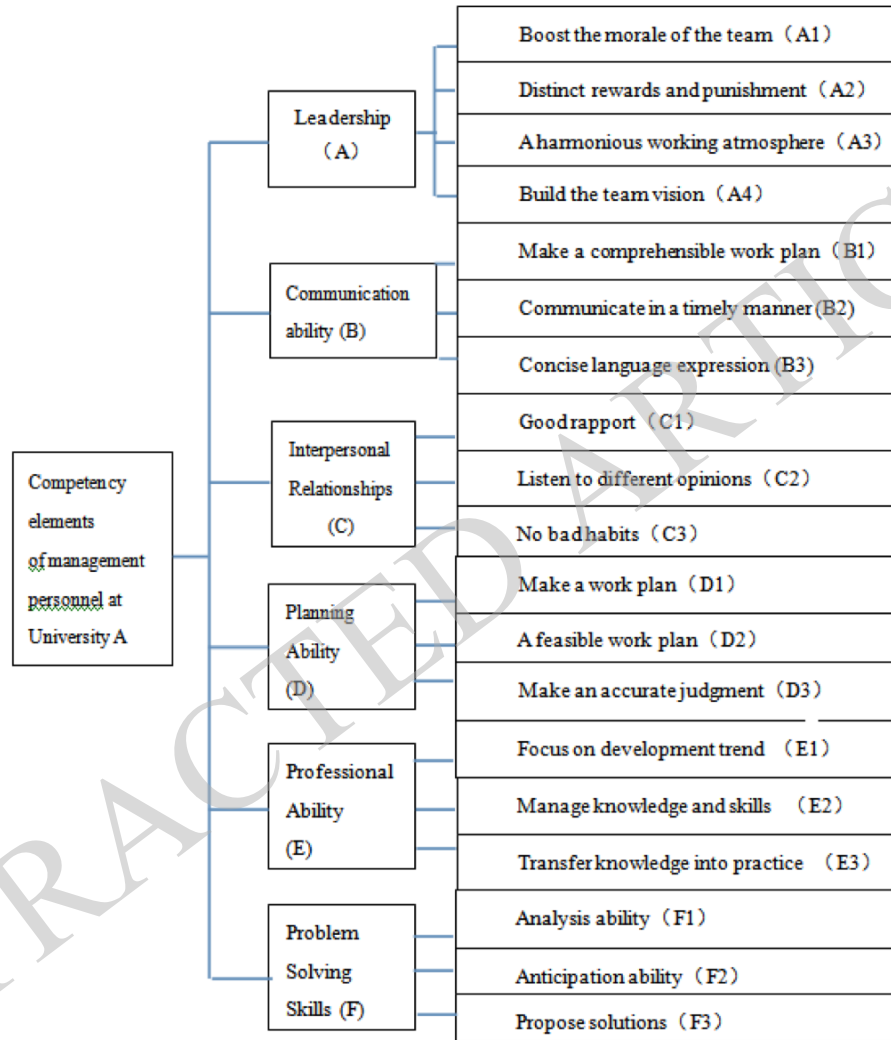


Fig. (1). The hierarchical structure of competency elements.

Table 2 shows that KMO value is larger than 0.7, and the spherical test of Bartlett is also approved by a confidence level of 0.95, therefore the questionnaire is suitable for factor analysis.

The SPSS19.0 factor analysis is employed to verify the convergent validity and differentiate validity. We utilize the principal component analysis to extract factors, use the orthogonal rotation based on the maximum variance method, delete repeatedly entries with lower load factors to extract factors whose eigenvalue is greater than 1, and finally get 19 explainable effective factors, and the accumulative total of variance accounts to 62.5%. So the scale has a better structure validity.

2.3.2. Reliability Analysis

According to the inherent reliability of SPSS19.0 test scale, the result shows that the overall Cronbach's alpha value of the data is 0.832; the Cronbach's alpha value of each factor is 0.732 to 0.826. The reliability of the scale is higher.

2.4. The Weight Setting

This research adopts the analytic hierarchy process to empower. The analytic hierarchy process is integrated into the qualitative and quantitative methods, and its systematical analysis and calculation process is simple, and carries out the

test in combination with the quantitative method at the same time. The analytic hierarchy process can greatly reduce subjective judgment errors.

According to the hierarchical organization chart of the competency elements of the managerial personnel at University A (Fig. 1), we can know that the structure chart can help respondents clearly master the structure of the competency model and is conducive to make accurate judgments and scoring on the dimensions and elements.

A judgment matrix (Table 3) is worked out to compare and judge the relative importance of each element of competency.

We made the questionnaire survey by emails. A total of 62 questionnaires were issued, 58 were returned, and the number of effective returned questionnaires was 54. After conducting questionnaire statistics, we get the table of the

importance of the elements of the management personnel competency model at University A (Table 4).

(The dimension comparison scale of each element is omitted here.)

The weight is gained by calculating, as shown in Table 5.

3. THE APPLICATION OF THE COMPETENCY MODEL IN HUMAN RESOURCES PERFORMANCE MANAGEMENT SYSTEM AT UNIVERSITY A

Applying the competency model into the performance management not only should focus on the key performance indicators, but also pay attention to the influence of each element of the competency on the performance. We should convey this management guidance into the inspected personnel to guide them to improve their working ability, thereby turning the single assessment of the performance manage-

Table 3. The judgment matrix.

Score	Definition	Instructions
$i/j = 1$	Equally important	The two elements, i and j, have the same importance of a particular attribute.
$i/j = 3$	A little important	By contrast, i is slightly more important than j.
$i/j = 5$	Very important	By contrast, i is obviously more important than j.
$i/j = 7$	Extremely important	By contrast, i plays the absolute important role.
$i/j = 2, 4, 6$		the compromise score
The reciprocals of the above numbers	The converse comparison	If i/j is equal to a, j/i is $1/a$.

Table 4. The dimension comparison scale of the competency model.

i \ j	Leadership	Communication Ability	Interpersonal Relationships	Planning Ability	Professional Ability	Problem Solving Skills
Leadership	1	2	1	4	5	2
Communication ability	0.5	1	0.5	2	3	1
Interpersonal relationships	1	2	1	4	5	2
Planning ability	0.25	0.5	0.25	1	2	0.5
Professional ability	0.2	0.33	0.2	0.5	1	0.33
Problem solving skills	0.5	1	0.5	2	3	1

Table 5. The dimension comparison scale of the competency model.

1 st Class Indicators	A Leadership				B Communication Ability			C Interpersonal Relationships			D Planning Ability			E Professional Ability			F Problem Solving Skills		
	A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3	F1	F2	F3
The weight	0.0959	0.2974	0.0554	0.0297	0.0325	0.0650	0.0108	0.0702	0.1244	0.0163	0.0171	0.0308	0.0092	0.0146	0.0073	0.0146	0.0585	0.0174	0.0325

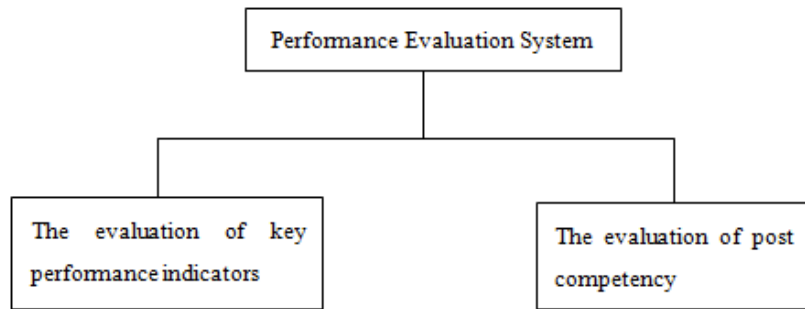


Fig. (2). The performance evaluation system of management personnel at university A.

Table 6. The weight of performance evaluation.

Positional Ranks	The Weight	The Evaluation of Key Performance Indicators	The Evaluation of Post Competency
Top management		70%	30%
Middle management		50%	50%
Low-level management		40%	60%
General staff		25%	75%

ment into increasing awareness of the behaviors in the process of the work.

Therefore, in the process of performance management, compiling the examination procedures of performance should not only take the business indicators into consideration, but also consider the ability index at the same time. It is a comprehensive method to combine key performance indicators with the competency model.

In combination with the actual situation of management posts of all schools of University A, performance management can be conducted from the following aspects.

3.1 The Performance Evaluation System of Management Personnel at University A

Different positional ranks have different key performance indicators and competency weights in evaluation. Generally, the higher the position level is, the higher request the completion of key performance indicators has. On the contrary, the lower the position level is, the more attention the completion of the competency will be attached (Table 6).

For managers, they need to realize self value through continuous learning. The management personnel performance appraisal based on the competency model can help managers clearly understand the competency elements of their jobs, and recognize their disadvantages thus to improve themselves. Firstly, managers can actively participate in job training, take the initiative to supplement their weak points, dig out their potential and improve their ability to be competent for jobs; secondly, managers should proactively communicate with their colleagues and leaders and clearly know their roles and position in college development to improve their work enthusiasm; thirdly, they should emphasize various decisions of the college and university, have a clear un-

derstanding of its development trend and make themselves suitable for their posts.

4. DISCUSSION

The competency model is an important tool of improving organizational performance management and will become an important task of human resources performance management.

The author clarifies the relationship between competency and performance management in this paper, and makes a classification of management positions in University A on the basis of its actual situation. With administrative staffs from 31 institutes and schools of University A as the research object, in combination with assessment center method, questionnaire survey, analytic hierarchy process and other methods, the author constructs the competency model of human resources performance management system in University A and analyzes the practical application of the competency model in human resource performance management.

But the competency model construction in this paper is based on management personnel of University A, which is a specific post; the research has some limitation in terms of the comprehensive assessment of human resources performance of polytechnic universities. To improve the competency model, and guarantee the practicability and maneuverability of the competence model in performance management, develop a more scientific, effective and comprehensive competency scale and tools is worth further study.

CONFLICT OF INTEREST

The author confirms that this article content has no conflict of interest.

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