

Investigating Relationship between Human Resource Empowerment and Innovative Performance in Vocational Training of Guilan Province

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Abstract

At the present time, because of competition between organizations, empowerment of employees is considered as primary needs of any organization. Employees who have high ability of job performance will find their actual position in the organization and are looking for opportunities. One of the effects of empowerment is innovative performance. This study sought to examine the relationship between human resource empowerment and innovative performance in vocational training of Guilan. Also the effects of three variables of leadership style, culture and creativity on empowering employees are examined. The present study as its purpose, targets applied type and the statistical population of research are employees of vocational trainings of Guilan province that using non-random analytical sampling method, number of 110 employees were selected as the statistical population. Total number of 110 questionnaires was distributed among the population. 10 questionnaires were returned that adjustment of the numbers with Morgan table confirms sample size to be appropriate. Necessary data were collected through questionnaire. To analyze the data, Pearson correlation coefficient and to test normality, Kolmogorov-Smirnov test was used. Also Friedman test for ranking influence of variables of culture, creativity and leadership style were used.

Key Words: Empowerment, Innovative Performance, Innovation, Guilan Vocational.

Introduction

Given the central role of man and human resources in resolving problems and creating advanced technologies, and considering the fact that the most important factor in productivity of organizations and ultimately the whole society is human resources; there is no doubt that the prosperity of any society lies on the improvement of HR and it is the reason why authorities of organizations assisted with professionals in beavering and human resources, have paid special attention to staff development. Abilities of employees causes the organizations to succeed in their business and also causes the individuals to be motivated in their responsibilities and their jobs and also causes their job sound meaningful for them (Afjeh and Miri et. al., 1388). Today, individuals in organizations are not equivalent to workers and merely their mechanical energy is not intended. Vocational agency staff has become the main operators of working process and partners of organizations. Therefore, not only managers should have leadership skills, but also employees must learn the ways that go towards self-leadership). To achieve these characteristics, organizations must empower their most important sources and tools of competition, which is human factor (Iranian-Zadeh and Babaei, 1389).

According to Drucker (1999), economic growth is dependent on empowering educated employees. This management intellectual, looks at scientific personnel more as asset rather than expense (Soltani et al., 1392). Research indicates that fundamental challenge for companies and organizations in the twenty-first century in which environmental conditions and rules of the competition is so brutal, complex, dynamic and uncertain, has been creativity and innovation. If organizations stuck in a repetitive and mechanical regularities, they will be destroyed; it is because most organizations, not because of external threats, but mainly due to repetition and lack of innovation and creativity have been disappeared (Sadaghiani and Dehghan, 1389).

Nowadays, considering the importance of the issue above, the present study sought to investigate the relationship between these two variables and it can be stated that its main purpose is to find an answer to the question: *What is the relationship between human resource empowerment and innovative performance in vocational training of Guilan province?*

Literature Review

The English word 'Empower' in the *Compact Oxford English Dictionary* is translated as powerful, licensing, power up. This term also includes the concepts of power and freedom to self-management, and in organizational concept means organizational structure designed in a way in which individuals along with controlling themselves is also willing to accept greater responsibilities. In other words, empowering employees means to share information with employees in order to establish a group and designing organizational structure (Salajeghe et. al, 1392).

Empowering when properly understood has the following characteristics:

1. Empowering clearly is associated with the idea of continuous improvement in overall performance of organization.
2. Empowering emphasis on the maximum use of intellectual resources existing in all individuals.
3. Empowering creates conditions and innovations that goes beyond all that is in the framework of earlier views such as Participatory Management and Emotional engagement at work (Kynla, 1390: 13).

The most important and most extensive assortment of approaches to empowerment is that of Canungo and Kannger after which an alternative approach was added by Thomas and Wolthous which is *Communicative Approach*.

- I) *Communicative Approach*: Power as a communication structure is the capacity that person A has to affect person B in such a way that people do things that otherwise would not do. Therefore, power is capacity or talent. Hence it can be said that empowerment is a process in which the management is trying to divide their powers among his subordinates. Power and authority is not necessarily the same thing (Tabarsa and Ahangar, 1387).
- II) *Motivational Approach*: Thomas and Wolthous concluded that empowerment is a multidimensional concept and cannot be solely based on a particular approach study (Borsa and Ahangar, 1387). Canungo and Kannger claimed that any strategy or management technique that leads to increased self-determination and self-sufficiency in employees, would be followed by empowerment in their employees. Thus, empowerment is the process of reinforcing self-sufficiency of individuals in an organization through identifying and recommending situations that makes the sense of 'Lack of Power' in individuals and the attempt to fix it with the help of official actions and also through use of unofficial techniques to previse and provide information that help them with their sufficiency in the organization. There are four factors in common among provided factors. One of the best studies conducted by Spritz introduces four factors of accepting personal result, self-sufficiency, significance and self-autonomy.

Some scientists have identified other indicators in this topic. One of these studies has been conducted by Mishra (1994) and then in other studies sense of trust was added to Spritz model and in this way five key dimensions of empowerment was introduced (Rajab Beygi et. al, 1388). Another case is that of Menon in which internalizing goals, perceived control, perceived competence and internal locus of control is referred to as agents of psychological empowerment (Afjeh and Miri, 1388). According to what has already been mentioned the main approaches to empowerment can be stated as below:

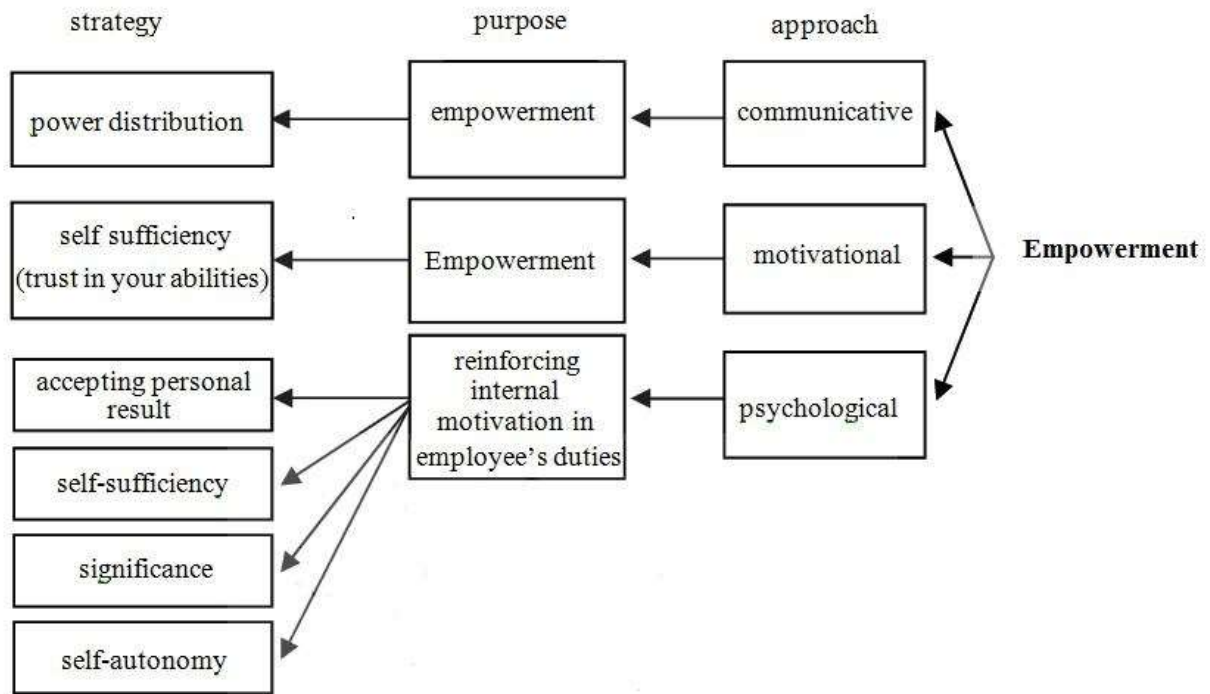


Figure 1: The main approaches to the definition of empowerment

Psychological dimensions of empowerment

Accepting Personal Result: accepting personal results includes ‘Beliefs of the individual within a specified period of time for his ability to change to desired direction’ (Lee, 2009, p 276; quoted by Afjeh and Miri).

Self-Sufficiency: Competence or self-efficacy refers to individual's beliefs. Refers to having ability to perform activities associated with their duties. As Bandura proposed three conditions are required for individuals to contribute to their sense of competence:

- The belief that they have the ability to do their job.
- The belief that they have the capacity to apply the necessary effort.
- The belief that there is no external barrier to stop them from doing the work required. In fact, it is the sense of capability in doing their job with high skills (Moulaii et. al, 1389).

When people feel sense of self-sufficiency therefore they have necessary expertise ability for successful completion of a work. Empowered individuals not only feel sense of competence but also they feel sense of confidence that they can do the job efficiently. They believe that they are able to cope with new challenges through learning and development.

Significance: significance is career goals’ values which will be judged in relation with standards or ideals of individuals.

Self-Autonomy: An individual feeling about right to choose for pioneering and adjusting activities. Examples in this context include: making decision on work methods or/and the amount of effort used (Afjeh and Miri, 1388).

Innovation

Innovation means accomplished creative ideas. The innovation is providing new products, processes and services to the market (Erabi, 1393: 91). Innovation represents the development of a new product, a series of new services or new production system where there is exclusive knowledge experience in it. Wang and colleagues believe that concept of innovation is a process which starts with an original idea and ends up with presentation to the market (Chen & Huang, 2009). Innovation in a cycle can be defined as (Tidd, 2001):

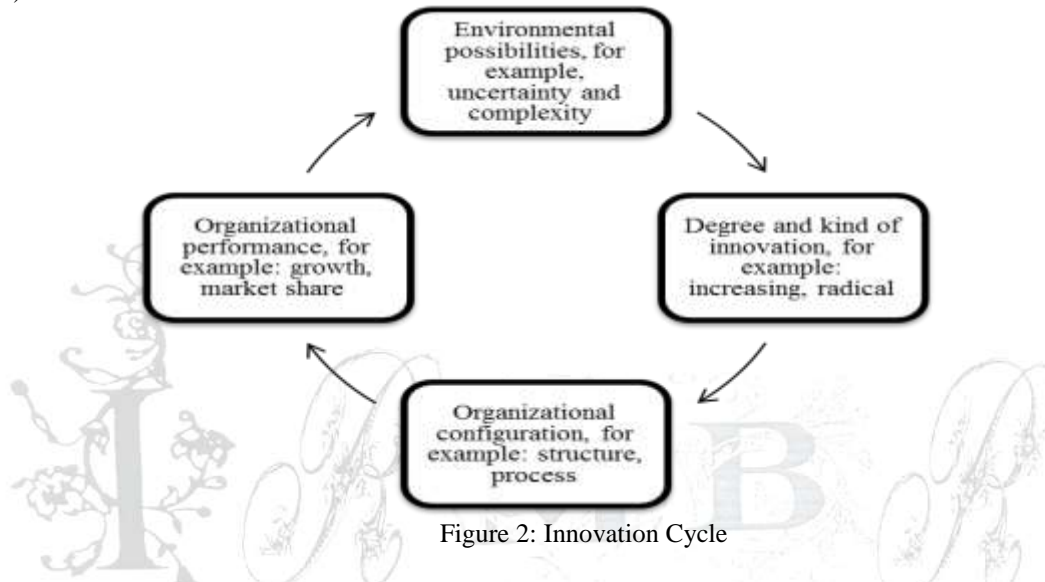


Figure 2: Innovation Cycle

Literature on strategic management looks at innovation as a critical tool for organizations to value and maintain competitive advantage in a complex and changing environment. Organizations are trying to develop their capabilities and superior performance through innovation (Ozbag et al., 2013).

Process of Innovation

Invention is an idea, concept, and original sketch, model for a product, device, process, or new or improved system. Invention is creation of new knowledge or new ideas. Process of innovation is a combination of existing technology and inventions to create a system, process or new and improved product. Technology-driven organizations have a different view on process of innovation. In a general overview, an innovative process includes:

- * Determining needs of market or technological opportunities.
- * To apply or adapt a technology to satisfy these needs or opportunities.
- * Invention (when necessary).
- * Transmission of this technology with trading or other institutional methods.

Process of innovation, integrates the project requirements, invention, development and transmission of technology. Ideas and concepts are generated in each of these three major stages of innovation stage. Innovation stage is when these three steps in the implementation and trading up the system, process and improved and new product are enhanced (Jain et al., 2010: 34).

Development and Evolution of Innovation Models

Since the early 1950, when discussions over innovation was proposed; up to now, six generations of innovation models have been proposed that each of these generations has a unique feature. General overview and characteristics of each generation is presented in the table 1.

Table (1): Six generations of innovative models

Generation	Year	Characteristics	Path
First	50s and 60s	technological pressure/ linear pattern	respectively: research and development, design and development, production, marketing, sales.
Second	mid 60s and 70s	need for market, Demand pull	respectively: assessment, marketing, research and development, production, sales.
Third	80s and mid 90s	Understanding the interaction between different elements and feedback loops	
Fourth	mid 90s and 2000s	Parallel patterns of time pressure, savings in process	
Fifth	mid 2000s up to 2010	Identifying environmental and upstream factors, downstream Beneficiaries	
Sixth	after mid 2010s	the establishment and development of team work networks and working in networks	

Source: The conclusion of Ghahremani and Hassan-Moradi

Conceptual Model for Research

According to studies conducted, the conceptual model for the study has been combination of organizational behavior management parameters and strategic management parameters.

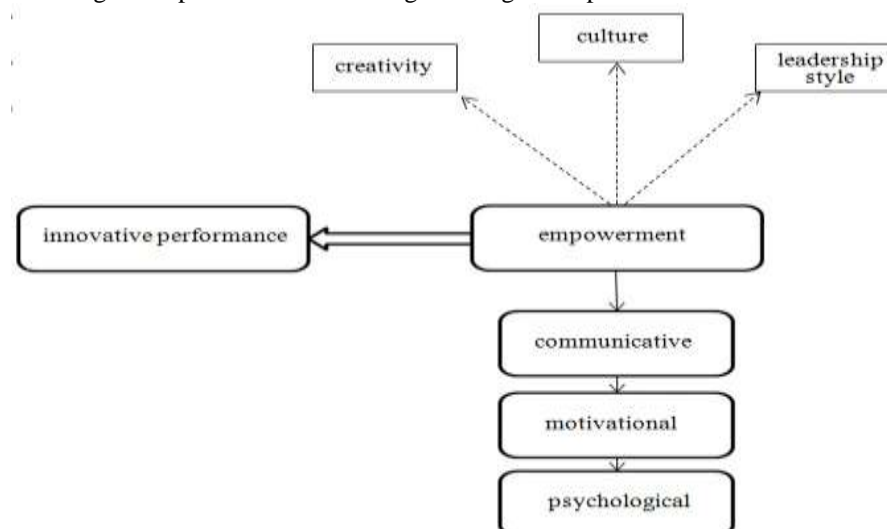


Figure 3: Conceptual model of research

Source: The conclusion of Lam (2004), Martin and Bush (2006) and Choi (2006)

Hypotheses

Main hypothesis: *There is a direct relationship between empowerment of human resources and innovative performance.*

Subsidiary hypothesis 1: *There is a direct relationship between human resource empowerment and creativity.*

Subsidiary hypothesis 2: *There is a direct relationship between human resource empowerment and culture.*

Subsidiary hypothesis 3: *There is a direct relationship between human resource empowerment and leadership style.*

Methodology

The study has targeted a search for data and information about the variables of empowerment, innovation, creativity, and culture and leadership style in technical and vocational education in Guilan province. The objective of the research is applied and it is looking for a solution for problems in this field. Also, present study is investigating the method of relationship between factors obtained from fundamental research and ultimately tries to present a research model (Erabi, 1388: 39). Methodology of the research is descriptive and survey. It aims to understand aspects of the subject and describe the distribution method in the given population (vocational training). Also, by learning the facts described, it has been tried to create helpful tips to improve the present theory and enhance the effectiveness and efficiency of organization (Erabi, 1388: 120).

To collect literature, variables, scientific background, library studies have been conducted. In the field level, operation and functional levels in order to collect data, a questionnaire was distributed among the sample population and then the data were analyzed. In general it can be said in a statement that the present study has a practical purpose and strategy of the research is descriptive survey.

The Population, Sample Size and Sampling Method

The population in this research is vocational training personnel of Guilan. The total numbers of personnel are 627 individuals who are working in 16 cities and 23 centers. There are people in the organization with different categories and different situations. A large number of these people are trainers or those who have servicing jobs. Eligible personnel who are member of organization's main body are about 100 individuals in the entire province. Considering the fact that population number was limited, sampling method of non-random and judgmental was used to investigate the whole 100 people in the population. Questionnaires were distributed among sample population that after collecting questionnaires, the number of 10 questionnaires was obtained which this number is in accordance with Morgan table's sample number.

Methods and Instruments of Data Collection

Methods of data collection is library and field study. Out of 100 questionnaires sent, 81 were returned and the analysis was performed according to this number of questionnaires. Questions of the questionnaire consisted of 62 specialized questions about the variables discussed which were standardized, simple and understandable for respondents and in order to respond to these questions, Likert five options spectrum has been used.

Reliability and Validity of the Survey Instrument

Validity

The questionnaire used in this study was adapted from a twelve-volume series of *Management Journal* written by Seyyed Mohammad Moghimi and Majid Ramadani. All questionnaires have been selected from the most prestigious scientific journals and also masters and doctoral dissertations of the world. Also, the questionnaires mentioned were adjusted with actual needs and circumstances of Islamic culture in the society and localization was made to the question. After extracting the questionnaires and supervisor's approval, questionnaires were distributed among the employees.

Reliability

Reliability is one of the technical characteristics of measuring instruments and it is to say that measuring instruments under the same circumstances, to which point will get the same results (Sarmad et. al., 1376). In other words, the reliability of measurement is how variables under measurement are error free (S. Tall and hawkins, 1388). One of the methods of calculating reliability is using Cronbach's alpha formula which in this study was used. This method is used for calculation of internal consistency of measuring tools such as questionnaires. Cronbach's alpha coefficient is always between zero and one. The more value of this coefficient is closer to 1, the greater reliability of the questionnaire is.

Table 2: Cronbach's Alpha

Questions Related to	Number of questions	Cronbach's alpha obtained
Empowering employees	5	0.838
Being an innovative organization	29	0.916
creativity	13	0.864
Culture	8	0.899
Leadership style	7	0.893
Total Questions	62	0.941

Descriptive Analysis of Data

In any statistical analysis the first step is to summarize data display (Sadaghiani and Dehghan, 1389). Details of information about describing variables of the research are presented in the table below.

Table 3: Describing data

Variable	Minimum	Maximum	Average	Standard deviation
Empowerment	0.8	5	4.133	0.733
Innovative performance	1.38	4.69	3.54	0.741
Creativity	1.46	4.85	3.38	0.773
Culture	1.5	5	3.89	0.867
Leadership style	1.29	5	4.1	0.750

Inferential Analysis of Data

Normal Distribution of Data

For using the statistical techniques first it must be determined that the data collected from the distribution is normal or abnormal since in the case of normal distribution of the data for testing hypotheses parametric tests can be used, and in the case of abnormal distribution, non-parametric tests can be used.

To study the normal distribution of data, the Kolmogorov-Smirnov test was performed:

Table 4. Results of the normalized variables

Variable	Kolmogorov-Smirnov statistic	level of significance
Empowering human resources	1.290	0.072
Innovative performance	1.708	0.065
creativity	1.546	0.053
culture	1.435	0.069
Leadership style	1.717	0.092

According to the table above the value of the Kolmogorov-Smirnov test statistic and obtained value of variable sigma and since the value of significancy level for variables is more than 0.05; thus, the research sample data is normally distributed and Pearson correlation test can be used for testing hypotheses.

Table 5: The results of testing hypotheses

	Independent variable	Dependent variable	Error rate	Level of significance	Correlation coefficient	Results
Main hypothesis	Empowering human resources	Innovative performance	0.01	0.000	0.889	Confirmed working hypotheses
Secondary hypothesis 1	Empowering human resources	Creativity	0.01	0.000	0.754	Confirmed working hypotheses
Secondary hypothesis 2	Empowering human resources	culture	0.01	0.000	0.791	Confirmed working hypotheses
Secondary hypothesis 3	Empowering human resources	leadership style	0.01	0.000	0.581	Confirmed working hypotheses
N= 81						

As it can be seen in table 5, a correlation between the amount of empowerment of human resource and innovative performance of employees is 0.889. Which indicates that there is a direct and strong correlation between the amount of empowerment of human resources and innovative performance of employees in vocational training in Guilan. Also, the correlation coefficient between variables of creativity and empowerment of human resources is equal to 0.754, human resources and culture is 0.791 and finally between human resources and leadership style is 0.581. All these coefficients indicate a strong and direct correlation.

Now, in order to ensure the existence of cause and effect relationship between variables regression analysis will be used:

Table 6. Model Summary ^b

Model	R	R ²	Adjusted R Square	Std. Error of the Estimate
1. innovative performance	^a .889.	.790.	.787.	20737.
2. creativity	^a .754.	.568.	.562.	35514.
3. culture	^a .791.	.626.	.621.	30505.
4. leadership style	^a .581.	.337.	.329.	34720.

a. Predictors: (Constant), empowering human resources.

b. Dependent Variable, innovative performance.

The table above (Model Summary) includes, multiple correlation coefficient (R), coefficient of determination (R^2), adjusted determination coefficient (R^2 adj) and standard deviation of estimation (Std). As it is obvious, the amount of R obtained in this table is the same as Pearson correlation coefficient).

Table 7. Analysis of Variance (ANOVA)

Table ANOVA ^b						
Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	12.743	1	12.743	296.346	0.000 ^a
	Residual	3.397	79	0.043		
	Total	16.141	80			
2	Regression	13.094	1	13.094	103.816	0.000 ^a
	Residual	23.058	79	0.126		
	Total	76.648	80			
3	Regression	12.306	1	12.306	132.245	0.000 ^a
	Residual	7.351	79	0.093		
	Total	19.658	80			
4	Regression	4.846	1	4.846	40.202	0.000 ^a
	Residual	9.523	79	0.121		
	Total	14.369	80			

a. Predictors: (Constant), empowering human resources

b. Dependent variables model: (1) innovative performance, (2) creativity, (3) culture, (4) leadership style

Table 7. represents whether regression model is able to estimate significantly dependent variable changes or not. In order to review the significancy level, the last line of table 7. is used. This column indicates the statistical significance of regression model in which if the obtained amount is less than 0.05 then it can be concluded that the used model is a good estimator for dependent variable. Significancy amount (Sig) in the table above is less than 0.05 which indicates that regression model is significant.

Table 8. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	1.383	.173	.889	8.008	0.000
	.678	.039		17.215	0.000
2	1.365	0.296	0.754	4.614	0.000
	0.688	0.067		10.189	0.000
3	1.412	0.254	0.791	5.559	0.000
	0.667	0.058		11.500	0.000
4	2.534	0.289	0.581	8.766	0.000
	0.418	0.066		6.340	0.000

a. Dependent variables model: (1) innovative performance, (2) creativity, (3) culture, (4) leadership style

Coefficients table also gives us information about the predictor variables. Beta or standardized regression coefficient represents the intensity of independent variable's influence on the dependent variable. Note that amount of Beta when there is only one independent variable in this model, the Pearson correlation coefficient between two variables (R) are exactly equal. Beta coefficient is used when there is more than one independent variable in the model. In this case, the amount of Beta helps us to compare relative contribution of each independent variable on prediction of dependent variable, i.e. it can determined which

variables have the greatest impact on the dependent variable. Significance level obtained in the test above is less than 0.05 which indicates the confirmation of research hypothesis.

Friedman Test to Prioritize Sub-Hypotheses

Friedman test showed that according to respondents, creativity, culture and leadership style has significant differences with each other. Also, the highest average rating according to respondents has been culture. Creativity and leadership style are placed in the following orders.

Table 9. Friedman Test Results

secondary variable	Average rating
Leadership style	1.99
Culture	2.01
Creativity	2.00
N = 81	

Conclusions and Recommendations

At first this question will be answered that *why empowerment must be started?* Nowadays, organizations are shrinking, making their job more and more. By empowered programs, it is possible to train empowered employees which results in faster execution of tasks, independent employees, Progress of organization in the competition world and surpassing competitors, introduction of new techniques and gaining competitive advantage. With employees empowered, the expenses will be saved, organization will be flexible and protected against changes, intellectual resources of employees will be used efficiently and finally productivity will be increased dramatically.

Empowerment is one of the crucial factors in today's organizations and the need for empowerment in organization is felt necessary. If in vocational training, education of self-management skills, self-control, decision-making in critical situations and such issues in a continuous manner and using new and updated resources is made, it can be stated that employees may have more contribution to the prosperity of their organization. On the other hand, by empowering employees their innovative performance and creativity will be developed and can provide acceptable services and requirements of today's society for its students. Therefore, these organizations will surpass their rivals.

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