

## **Review and Assess of Strategic Management of Human Resources and Technological Innovations among Universities of Kohgiluyeh-Boyer Ahmad**

<sup>1</sup>Ahmad Ansari and <sup>2</sup>Mohammadamin Ansari

<sup>1</sup>Department of Management, Payame Noor University, 19395-4679, Tehran, I.R. Iran

<sup>2</sup>Department of Management, Yasouj Branch, Islamic Azad University, Yasouj, Iran

**Abstract:** The purpose of this study is to evaluate of strategic management human resources and technological innovations among universities of Kohgiluyeh-Boyer Ahmad. This is a survey research and the population of this study consisted of all faculty members of universities and higher education institutions are universities of Kohgiluyeh-Boyer Ahmad that 130 faculty members were selected as the sample in this study. This study seeks to answer 9 hypothesis is that using one sample t and spatial correlation research was to test this hypothesis. The results of these assumptions are summarized as follows: the first hypothesis of a link between human resources with technical innovation in universities of Kohgiluyeh-Boyer Ahmad denies. The second hypothesis of the relationship between education and technological innovation at the university of Kohgiluyeh and Boyer-Ahmad is confirmed. The third hypothesis reward performance evaluation of the relationship between service and technical innovation in universities in Kohgiloyeh confirmed. The fourth hypothesis explores the relationship between involvement and technical innovation in the universities of the province's kohgiloyeh that this hypothesis is confirmed. The fifth assumption is a positive relationship between innovation and technical innovation in the University District staff Kohgiloyeh confirmed. Sixth hypothesis implies that appears between organizational performance and technical innovation in the universities of the province there Kohgiloyeh that this hypothesis is confirmed. The seventh hypothesis relationship between age and attitude of staff towards technical innovation in universities Kohgiloyeh review the results show that there is a positive relationship between these two variables. Eighth hypothesis that the relationship between education staff and attitude toward technical innovation Kohgiloyeh Province's universities to reject the hypothesis. Ninth hypothesis relationship between sex workers and attitude toward technical innovation universities in Kohgiloyeh rejected.

**Key words:** Technological innovation, training, human resources, employee involvement, organizational performance

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### **INTRODUCTION**

Higher education is closely related to the progress of human societies. Universities in the world to meet the needs of the country are now engaged in teaching millions of students and knowledge-based economy in developed countries is a priority. Different countries due to positive connection with the development of national higher education in the past two decades have made a great effort to expand higher education. This is because higher education is an important element of human resource development will be considered. From world war II on the side, two of the world revolution occurred the scientific revolution first happened in the early twentieth century in which universities in addition to the training mission, the mission also undertook research. Accordingly, groups and research centers within the

university came into existence. The second scientific revolution happened in the late twentieth century in which universities in addition to the educational and research mission, the mission took third technology innovation and entrepreneurial universities are emerging. (Etzkowitz, 2001). In this regard, the productivity of faculty members in higher education institutions is of utmost importance because one of the important tools for the survival of any organization and objectives, human resources. Human resources, the most important asset and a major source of competitive advantage, any organization considered (Soltani, 2006).

The need for a strategic look at the human resources issue is undeniable that environmental changes on its importance increases. Formation of the space and the integration of their human resource strategies, managers of the main challenges universities.

The university like other organizations in order to achieve and maintain their competitive advantage and a fundamental constant struggle to upgrade their core competencies (Robbins *et al.*, 2002). Such efforts inevitably, they will be forced to shorten the life cycle of their products. This procedure resulted in the organization due to rapid changes and uncertainties inherent in the environment on the one hand and increasing demand on the other hand with the continuous development of research and innovation capabilities their close relationship on set. Valuable and effective nature of research and development, researchers have led to the emergence of innovation management as a key to productivity and creativity in the organization of research and development and the resulting prosperity and life is to know (Chang and Lee, 2006). Therefore, the main issue is that study the relationship between strategic human resource management practices and technical innovation in universities and higher education institutions there Kohgiluyeh-Boyer Ahmad? Studies that have been conducted in this area is the following.

Examine the motivational factors affecting the absorption and retention of skilled manpower in the manufacturing and operation of the dam and power plant Shahid Abbaspour this study was conducted by Salehi (2001). Their findings suggest that the four motivation, salary and benefits, welfare, promotion and design effective satellite attract and retain staff.

Bahrami (2011) to explain the relationship between the functions of strategic management of human resources and technological innovation in the public universities of Isfahan province. Human resource management functions, including training, compensation, performance evaluation, human resources and partnership. The results of this study, analysis of the data showed that the mean scores of the functions of strategic human resource management and technical innovation in the public universities of less than average and the functions of strategic human resource management and technical innovation has been a significant multiple correlation. These results are consistent with the results of our study that concluded that the training, human resources, performance evaluation and participation there correlation match.

Sadeghi and Mohtashami in a study titled "Strategic Actions of Human Resources and Organizational Innovation in One of the Military Bases", concluded the strategic human resource practices including staffing, training, participation, performance appraisal and reward positive impact on organizational innovation and the attitudes and behaviors of employees and organizational innovation is effective. In our research we came to the conclusion that the training of human resources,

participation and performance evaluation with technical innovations that correlation of the results of our research results and Mohtashami corresponded to the Sadeghi.

Safari *et al.* (2009) in his study entitled "The Relationship Between Organizational Structure and Innovation of Iran Physical Education Organization Experts" concluded that there was a significant relationship between education and innovation experts. We have also concluded in their study that the education level of faculty members faculty members' attitude towards technical innovation universities in kohgiluyeh there in this regard our results Safari matched results there.

Effects of innovative human resource management, production efficiency and the 4 criteria of recruitment, remuneration and training to show the strategic human resource practices used. He indicated that the integration of strategic human resource practices associated with improved yield (MacDuffie, 1995). Ichniowski *et al.* (1997) produced effects similar strategic human resource practices examined in the study. They used different criteria in strategic human resource practices including incentive pay, recruitment and selection, team work, work tasks, flexibility, job security, communication and education and proposed that the operation would reach the level of strategic human resource higher productivity than conventional methods such as defining the scope of work specified, the laws of hard work and careful monitoring of the hourly payment (Ichniowski *et al.*, 1997). In addition, Youndt *et al.* (1996) using the 4 following strategic human resource practices including staffing, training, performance evaluation and compensation, showed that the system of recruitment, training, performance evaluation and compensation, showed that the system of strategic human resource practices directly related to the dimensions of innovation. To determine the 7 key steps in strategic human resource practices, including business development, training, performance appraisal, compensation, job security staff and create meaningful jobs and use them to develop their innovations. The results, suggest that each of them can be used as important levels of innovation (Delery and Doty, 1996). In addition, strategic human resource practices, including training, performance appraisal reward by a field study examined 73 participants. The results showed that these operations play an important role in innovation (Collins and Clark, 2003). Marlyng (2002) in a study titled "Effective Military Innovation: Organizational and Technical Aspects" to the study of innovation in organizations military forces and the military's found that organizational innovation, plays a major role in the effectiveness increased power military power are. Miao

(2008) in the study of strategic human resource practices in military nurses found that the average level of education of nurses in their recruitment is done on the basis of professional qualifications and the salary received are unhappy. Performance evaluation is carried out irregular manner, and in general, the structure of strategic human resource practices are in normal condition. Yang *et al.* (2008) in a study titled "Innovation System of Military Hospitals" suggests that teaching methods and models in Shanghai, China, military hospitals to the development of organizational innovation and opportunities for improvement its organizational.

#### **Hypotheses:**

- It seems that the human resources with technical innovation in universities there Kohgiluyeh and Boyer Ahmad
- It seems that the technical innovation in university education there Kohgiluyeh and Boyer Ahmad
- It seems that the assessment of the performance of the service bonus with technical innovation in universities there Kohgiluyeh and Boyer Ahmad
- It seems that the involvement of technical innovation at the University of Kohgiluyeh and Boyer Ahmad are related
- It seems the staff with technical innovation Innovation at the University of Kohgiluyeh and Boyer Ahmad are related.
- It seems that the performance of the organization with technical innovation in universities in Kohgiluyeh there
- Between the ages of employees and employees' attitude towards technical innovation universities in Kohgiluyeh there
- The relationship between employee education and attitude toward technical innovation universities in Kohgiluyeh there
- Between sex workers and attitude toward technical innovation universities in Kohgiluyeh there

According to the presented above, the overall objective of this study was to investigate the relationship between strategic human resource management practices and technical innovation in universities and higher education institutions is Kohgiluyeh and Boyer Ahmad.

#### **MATERIALS AND METHODS**

Research methodology is a survey. Data and information required from the study were used. Other data in the literature, theoretical framework and indicators and

information about the population and its characteristics study of literature and organizational documents were collected and searched on the Internet.

**Statistical society and sample:** Units that have at least one common attribute set to define a target population and are usually represented by Khaki. The study population included all faculty members of universities and higher education institutions are Kohgiluyeh and Boyer Ahmad. Sampling forms part of the population and "sampling" is the percentage of a population as representative of the community. The percentage of the population and the characteristics and parameters used to obtain specific information. Sampling and cluster randomized destroyed. And all organs and institutions of higher education faculty questionnaires to randomly selected individuals will be given to them so that the chances of being selected randomly each sample and selection of people is not a member of any effect the selection of other members of society. The number of sample, using a statistical formula to determine the sample size was estimated at 130.

**Data collection tool:** Hypotheses as suspected, the solutions proposed are the possible answers on the question paper. The researcher must have the tools necessary data of the population (sample) is the statistical gathering analysis, processing, conversion data, to test their hypotheses. Various tools are needed for data collection. This type of tool is subject to various factors such as the nature and methods.

Answer and solution finding to the problem selected in each study is required to obtain the data by which to hypotheses that have been proposed as possible responses temporary research question to the test. Normally there are four major tools for data collection:

- Review (refer to) documents
- Find
- Interviews
- Inventory

The data is questionnaires. Instruments included a questionnaire of 45 questions based on strategic human resource management functions (Chen and Huang, 2009) 5-point Likert scale questionnaire of 32 questions and 5-point Likert scale was developed technical innovation.

**Data collection method:** In this study, secondary data (data that has already been produced and the resources available), library and Internet resources collected through studies and research have been used to develop

the theoretical foundations. The primary data (data that previously did not exist and must be created by the researcher) using a questionnaire provided. Inventory is one of the most common tools for data collection in survey research. The study will also answer questions from a questionnaire survey and ranking criteria were used for data collection. In this study, a questionnaire was used for data collection delivery by the presence in the sample it was done.

**Data analysis method:** The statistical study of data collection is required sample analyzes performed on the data collected quantitative data into qualitative data and we can tell them hypothesis based on our proven or rejected. The data collected, both descriptive and inferential analysis. Descriptive statistics, frequency distribution, percentage, standard deviation for descriptive data analysis and test t-test, F, Pearson correlation, multiple regression and analysis of covariance was used for analytical data. Data were analyzed using SPSS Software.

## RESULTS AND DISCUSSION

**Multiple regression analysis:** In the second part test hypotheses as you can see, the relationship between independent variables and the dependent variable magnitude of each separately as mutually discussed analyzed. In this study in order to determine the effect of the independent variables on the dependent variable contribution paid dimension regression analysis. Enter here the method for arriving at the same time dependent and independent variables used (Table 1).

Due to significant levels obtained in Table 1 that all of the significant level of the variable component of human resources (0.36) are  $<0.05$  it is clear that all the independent variables (the variable component of

human resources). Research on the dependent variable (technological innovation) have a significant impact. Due to the significant level of human resources between 0.36 and 0.05 is higher then the effect on the dependent variable of meaningful, reliable and invoked. One of the other components of the test, beta coefficients which can be identified due to the coefficients which is the most effective. The beta coefficient (beta) is larger than the effect on the dependent variable. Here, the most effective performance of the organization or universities (0.409) and the least effect on the level of technical innovation universities (0.121) and organizational involvement is variable. To determine the extent to which the independent variables could explain the variance of the study variables and the dependent variable statistics regression analysis are shown in. As seen in Table 2, the coefficient of determination (or  $R^2$ ) is equal to 0.690. This study states that 68% (coefficient of determination adjusted) of the variance changes in technical innovation and independent variables in the equation explain that it could be concluded that a significant amount (about 0.7 or 70%) of the variance is explained study. Considering the significance level  $<0.05$  is obtained, it can be realized that the independent variables on the dependent variable, technical innovation have a significant effect.

Standard error of estimate of the distribution points around the regression line (in two dimensional space) measures that have been estimated according to Table 3 is 0.339. The value of this index is larger distribution points around the regression will be higher and vice versa.

The linear relationship between the dependent variable to determine the uncertainties associated with the independent variables, the ANOVA (3) contains the regression analysis is presented. In this chart, the

Table 1: Multivariate regression model of technical innovation in universities Kohgiluyeh Boyer Ahmad demonstrates

Variables	Unstandardized coefficients (B)	Std. error	Standardized coefficients (β)	t-values	Significance level
Evaluation of service reward faculty members	0.278	0.093	0.234	2.989	0.003
Innovation faculty members	0.192	0.070	0.186	2.738	0.007
Organizational participation of faculty members	0.147	0.095	0.121	1.548	0.000
Performance	0.346	0.055	0.409	6.305	0.000
Human resources	0.058	0.064	0.059	0.911	0.364

Table 2: Indicators statistics regression analysis of the faculty members of ICT research universities

Model	R	The coefficient of determination ( $R^2$ )	Adjusted coefficient of determination	Std. error of the estimate
1	0.831	0.690	0.678	0.339

Table 3: Regression analysis of technical innovation in universities Kohgiluyeh-Boyer Ahmad (ANOVA)

Models	Total coefficients	Average of coefficients	F-value	Significance level
Regression	31.451	6.290	54.801	0.000
Residual	14.118	0.115		
Total	45.569			

regression line variability is explained by the independent variables and 31.451 (1/69 vs. 69%) row estimates the residual value, the dependent variable by other factors (randomness) will be defined as 14.118 (98/30 at 31%) stated. Due to Significance level <0.05 test at 95% The test is meaningful significant relationship between the variables in the regression.

**Hypothesis 1 (it seems that the human resources with technical innovation in universities in Kohgiluyeh and Boyer-Ahmad there is a relationship):** Based on the correlation between the quantity and quality of human resources and technical innovation in universities, relationship to the intensity (0.58) is established according to the number it can be said that almost positive correlation There are high between the two variables. This relationship means that an increase in human resources at the universities of innovation and creativity at universities increases and vice versa. The level of significance (Sig.) these tests (0.071) which is significantly higher than expected (0.05) which indicates unrealistic and unreliable nature of this relationship so the results can be generalized to the population correlation The study does. Considering the above interpretations our hypothesis is rejected.

**Hypothesis 2 (it seems that the training of technical innovation at the university of Kohgiluyeh and Boyer-Ahmadthere is a relationship):** Based on the correlation between the amount and status of teaching staff at universities and universities of technical innovation, relationship to the intensity (0.863) is established according to the number claimed that the correlation could be positive and there has been very strong between. This relationship means that increasing and improving staff training in technical universities, the innovation and creativity at universities increases and vice versa. The level of significance (Sig.) the test (0.000) which was significantly lower than expected (0.05) is the real show and reliability of the connection and thus the results can be generalized to the population sample is under study. Considering the above interpretation is confirmed hypotheses about us.

**Hypothesis 3 (it seems that the assessment of the performance of the service bonus with technical innovation in universities in Kohgiluyeh and Boyer-Ahmad there is a relationship):** Pearson correlation test, the intensity of this relationship (0.716) estimates that showed a strong positive correlation between the two variables, since the correlation is higher than 0.7. This relationship means that the increase in staff bonuses, the rate of technical innovation in universities increases and vice versa. Significance level of the test (0.030) <0.05, the real show and reliability of the connection and the possibility to extend the results of the study, the research is to society. Therefore, these results suggest a hypothesis is confirmed.

**Hypothesis 4 (it seems that the involvement of universities in the province technical innovation of Kohgiluyeh and Boyer-Ahmad there is a relationship):** Between two variables, relationship to the intensity (0.691) is established which is close to 0.7 of the number and indicate strong positive correlation between these two variables. This relationship means that an increase in the contribution of organizational, technical innovation at the university level will increase and vice versa. The level of significance of the test (0.000) is less than the significance level accepted (0.05) is therefore, reflects the reality of this relationship and reliability that generalize the results to the research community is possible. The findings suggest the hypothesis is controversial.

**Hypothesis 5 (it seems the staff with technical innovation in universities in innovation Kohgiluyeh there is a relationship):** Pearson correlation test, the intensity of this relationship (0.633) estimates that indicate a positive correlation between the two variables is relatively strong. This relationship means that the staff and increase innovation, technical innovation at universities increases, and vice versa. Significance level of the test (0.000), indicating the actual and reliability of the connection and the possibility to extend the research results to the society. Therefore these results suggest a hypothesis is confirmed.

**Hypothesis 6 (it seems that the performance of the organization with technical innovation in universities in Kohgiluyeh and Boyer-Ahmad there is a relationship):** Pearson correlation test, the intensity of this relationship

(0.715) estimates that show a direct correlation between the two variables is positive and strong. This relationship means that the level of performance and efficiency of universities, technical innovation in the university realm of study increases and vice versa. The significance level (0.002) showed reliable and virtue of this relationship is the possibility of generalizing the results to the population studied. In other words, they affect performance or universities on technical innovation. Considering the theories and dissuasions these hypotheses were confirmed.

**Hypothesis 7 (between the ages of employees and employees' attitude towards technical innovation universities in Kohgiluyeh and Boyer-Ahmad there is a relationship):** Intensity of the relationship between these two variables (-0.422) is estimated. According to statistically test level (0.010), less than acceptable (05/0). This was significantly negative and real. In other words, the relationship between the age of employees and the level of technical innovation in universities there is an inverse relationship between the levels of technical innovation of employees decreases with age. In other words all those who are older or younger than the professors at the universities of their less technical innovation. Therefore, the hypothesis is confirmed.

**Hypothesis 8 (between education staff and attitude toward technical innovation universities in Kohgiluyeh and Boyer-Ahmad there is relationship):** Intensity of the relationship between education and innovation Taavby tests Kendall (0.17) and the Spearman (0.20). It is estimated that the intensity of the performance was poor. The relationship between these two variables have a significant level of 0.12 and 0.14, respectively both test and significantly higher than acceptable (0.05) is indicative of the intensity of the relationship unreliability low between these two variables. It cannot be true respect and solidarity upon which to make a judgment about this issue payment or the results of the sample can be generalized to the population not studied. It can be said that the education professors in other words such a significant effect on the rate of technical innovation in scientific activities at universities and their researches no hypothesis is rejected here.

**Hypothesis 9 (among sex workers attitude toward technical innovation universities in Kohgiluyeh and Boyer-Ahmad there is relationship):** The average for female faculty members 2.92 and 2.88 technical innovation for male teachers is estimated. Levine test and test F

(Fisher) equality of variances of two populations were studied. Due to the significance level of the test 0.537 and is greater than 5%, assuming equal variances (the null hypothesis) rejection, and other words equal variances of the two populations is confirmed. The more information the second row is examined to analyze the test. The level of significance (Sig.) tests the equality of the mean (0.688) with the assumption of equality of variances greater than 5%, the null hypothesis is confirmed and the claim of equality (difference) average rate of technical innovation based on gender of teachers accepted level of 5% Recommended. Based on the positive top and bottom 95% of negative results it can be claimed that a significant difference between the two populations is very low and the population mean (male teachers) and the second (female teachers) are different from each other. Due to the significance level and the upper and lower independent t-test we can conclude that the difference between the average value of the two communities in the grouping table, significant and not significant. So, gender on technical innovation not affect teachers in universities. Perhaps the main difference between this study and other studies conducted in extensive field research. In each of the studies reviewed consider one or more of the variables we examined, for example in the study, Collins and Clark (2003), strategic human resource practices including training, performance appraisal and reward were studied and the impact on innovation and research and the nobles (Zainab and Mohtashami, 2011). The impact of variables, employment, education, participation, performance appraisal and reward innovation were examined and as we see our research in terms of the comprehensiveness of the variables studied more widely is. In several research studied, the relationship between reward and technological innovation which in our study this relationship in the form of a hypothesis has not been investigated. We also study the relationship between gender and attitude towards technical innovation was evaluated in the studies reviewed did not examine this hypothesis. In this study, we investigated the relationship between education and attitudes in the form of a hypothesis was tested that hypothesis in other studies reviewed, there is not apparent.

## CONCLUSION

Shkaratan and Alexander (2009) in a study to investigate the possibilities and complexity of military technology and human resources to technical innovation in Russia and concluded that the evaluation of the quality of human resources is the most important factor in determining innovation.

## RECOMMENDATIONS

- Training courses in the field of registration practices, specific skills and methods to overcome the problems in the performance appraisal interview held
- One of the beneficial outcomes of the evaluation is conducted to determine training needs to be given careful evaluation and lack of a clear failure to implement the assessment of educational needs cannot be determined
- In upgrading, instead of relationships and characteristics unrelated to job evaluation score is the criterion
- Managers strengths and weaknesses of your annual personnel evaluation criteria rather than a temporary performance of faculty members
- Despite the complaints committee, the members of the faculty protest evaluation is essential
- Evaluation of the past as a proxy for current valuation not apply
- Create a supportive atmosphere and environment for members of the faculty of the managers
- Allowing qualified faculty members specializing in the design work related to their unit is
- Entrust the operational decisions of competent faculty members
- Use creativity and innovation techniques among members of the faculty (techniques such as brainstorming)
- Managers should have the opportunity to express all the faculty members and provide experts. Avoid harsh criticism for ideas and good practices, value and distinguish appropriate reward
- Senior management support, to remove barriers to innovation and strengthening innovation spirit of the members of the faculty which is a faculty member in pursuance of its leadership, creativity innovation in their fields are able to solve problems raised by the discovery of opportunities new and enhanced features of the individual innovation and better introduce itself as a leading organization

## REFERENCES

- Chang, L. and K. Lee, 2006. A new mandate for human resources. *Harvard Bus. Rev.*, 76: 124-134.
- Chen, C.J. and J.W. Huang, 2009. Strategic human resource practices and in novation performance the mediating role of knowledge management capacity. *J. Bus. Res.*, 62: 104-115.
- Collins, C.J. and K.D. Clark, 2003. Strategic human resource practices, top management team social networks and firm performance: The role of human resource practices in creating organizational competitive advantage. *Acad. Manage. J.*, 46: 740-751.
- Delery, J.E. and D.H. Doty, 1996. Modes of theorizing in strategic human resource management: Tests of universalistic, contingency and configurational performance predictions. *Acad. Manage. J.*, 39: 802-835.
- Etzkowitz, H., 2001. The second academic revolution and the rise of entrepreneurial science. *IEEE Technol. Soc. Magaz.*, 20: 18-29.
- Ichniowski, C., K. Shaw and G. Prennushi, 1997. The effects of human resource management practices on productivity: A study of steel finishing lines. *Am. Econ. Rev.*, 87: 291-313.
- MacDuffie, J.P., 1995. Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Ind. Labour Relat. Rev.*, 48: 197-221.
- Miao, D., 2008. Construction of a new strategic human resources management system in military nursing. *J. Med. Post Graduate*, 25: 22-33.
- Robbins, T.L., M.D. Crino and L.D. Fredendall, 2002. An integrative model of the empowerment process. *Hum. Res. Manage. Rev.*, 12: 419-443.
- Salehi, A.K., 2001. Strategic management accounting. *J. Public Account.*, 21: 93-83.
- Shkaratan, O.I. and V. Alexander, 2009. Human resources, the military industrial complex and the possibilities for technological innovation in Russia. *Int. J. Technol. Manage.*, 9: 464-480.
- Soltani, A., 2006. Seed reserve utilization and seeding growth of wheat as affected by drought and salinity. *Exp. Bot.*, 55: 195-200.
- Yang, P., C. Xing, T. LI and L. Zhan, 2008. Construction of innovation system of military hospital management. *J. Chinese Army*, 63: 12-25.
- Youndt, M.A., S.A. Snell, J.W. Dean Jr. and D.P. Lepak, 1996. Human resource management, manufacturing strategy and firm performance. *Acad. Manage. J.*, 39: 836-866.
- Zainab, S. and R. Mohtashami, 2011. The relationship between strategic human resource practices and organizational innovation in one of the military bases. *J. Military Med.*, 13: 102-97.