

# The Constructive Factors in Empowerment of Primary School Principals at Tehran City

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## ABSTRACT

This investigation was conducted by aiming at identifying the constructive factors in empowerment of primary school principals at Tehran city. The current study is of applied type in terms of goals and quantitative form in terms of data and it is exploratory research in terms of nature and type of study since some questions have been purposed in this survey that researcher does not know their orientation. For this purpose, according to multi-stage randomized sampling technique, a sample with size of 320 respondents (110 males and 210 females) was chosen among educational deputies in primary schools at Tehran city by means of Bola sample size formula (1970) proportional to population density, educational deputies in each of educational area within 10 regions of educational system in Tehran city answered to questionnaire of psychological empowerment derived from theory of Spertizer in 1995. This inventory includes 29 questions that have been drawn up with respect to empowerment of principals based on Spertizer's theory based on 6 variables of significance, competence, independence, effectiveness, sense of participation with others under their supervision. The reliability of questionnaire was derived by Cronbach alpha coefficient as 0.956. In order to examine construct validity, analysis of main components with Oblimin (Promax convolution) was adapted. The results led to extraction of 5 factors and these factors might interpret totally 74% of variance for variables. Five factors consist of sense of independence, significance sense, and sense of competence, sense of participation with other (sense of community) and sense of confidence. Finally, percentile norm was prepared for each of factors and the whole questionnaire. Research results indicate that constructive factors for empowerment of principals comprise of 5 (sense of independence, sense of significance, sense of competency, sense of participation with others, and sense of confidence) out of 6 factors. According to priority of the aforesaid factors, the answer for these values based on exploratory analysis on data shows that more than 74% of empowerment is interpreted based on five extracted factors from this inventory while factor of sense of independence with coefficient of 51.6% and factor of sense of confidence with 3.2% have respectively highest and lowest importance. Additionally, order preference of importance among factors indicates that variables of sense of significance and sense of competence with values of 8.7% and 6.4% are ranked as the second and third rates respectively based on importance.

**KEYWORDS:** Empowerment, Reliability, Validity, Norm, Educational Principals

## 1. INTRODUCTION

During two previous decades, attitude of organizations has been dramatically changed toward human. Today, human is not equal with a laborer in organizations and his/ her mechanical energy is not exclusively considered as important for them. Organizations have acquired a great belief to preserve and develop their achievements and that is the belief in human. It is unlikely possible to be acknowledged that human has been again discovered in organizations so that personnel in professional organizations have been converted into the main practitioners for work flow and organizational partners. Thus, principals not only should possess leadership skills but also they should learn those techniques in order to advance toward their own leadership [1]. To achieve these characteristics, organizations should empower their strongest sources and competitive tools namely human [2]. Employing of traditional methods of management leads to removing the sense of invention and innovation in personnel, increasing work volume, and some constraint for them. Also, full freedom for personnel may cause anarchy and disorderliness of affairs. The result of these two states is that physical and intellectual sources of organizations are not appropriately utilized and the organization may not achieve the given efficiency [3] (Peterson & Zimmerman, 2004). Empowerment establishes the needed balance among both aforesaid dimensions. In fact, empowerment is a tool that coordinates individual goals with organizational objectives and convinces the personnel of this idea that it also covers development and advancement for their organizational sources [4].

If empowerment does not exist in organizational management strategy the given organization is doomed to failure. The constant improvement makes sense only when personnel have the needed information at their disposal and to be trusted in order to be able to employ their skills and abilities. Although empowerment is personnel' imagination and perception regarding their role in job and organization and this is a task that should be

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done by managers for personnel, the managers may prepare the needed platform and opportunities for personnel to become more capable [5]. Accordingly, today concept of empowerment has been developed and it is not restricted to assignment of power and authority to personnel but it is a process that causes personnel to be able to improve their performance by learning of knowledge, skill, and motivation [6].

Concept of empowerment was introduced for the first time in 1980s and this concept and its relevant managerial and organizational factors have drawn attention and notice of researchers and practitioners in the field of management and organization. Vaten and Kameron [7] deems empowerment as concept of enabling of personnel namely we could help them to improve sense of self- confidence in them and to overcome their own disability or failure and to give them internal energy and motive to do their tasks.

Empowerment of manpower means the creation of a group of needed capacities in personnel to enable them for creating value- added in organization and to play role and fulfill the responsibility, which has been assigned to them together with efficiency and effectiveness [8]. Empowerment is not only to give power to personnel but it causes personnel to improve their performance by acquiring knowledge, skill, and motive. Empowerment is a valuation process that extends from organizational top management to the lowest rank [9]. Empowerment is to assign new responsibilities to managers so they should develop personnel's talent and ability and encourage them for risk- seeking and recognize their achievement officially [10].

Rifkin [11] considers empowerment as a process whereby personnel may dominate more over their own affairs and tasks and by acquiring high power, control of sources, confidence building, capacity creation, and active participation they can direct their own life path properly.

In educational organizations, due to its crucial role that empowerment of manpower may play in development and achievement of the society within various dimensions, is more important. Thus, it requires that with respect to its conditions and positions, educational system should identify the appropriate mechanisms for empowerment of its personnel including principals, deputies, and teachers and provide the needed facilities for their acquisition. Hence, the present study tends to identify the constructive factors of empowerment for educational principals in primary schools at Tehran City. Briefly, goals of this study may be implied as follows:

- Developing of empowerment components among deputies and principals
- Preparation of valid and reliable tools to be used in schools and educational system at Tehran city
- Providing valid and reliable tools for application in future investigations

### **Research History**

Kinla [12] has expressed that empowerment is a term, which has been used as daily slogan during 1980s and 1990s. Empowerment is a demonstrated concept that is adapted to method of improving employing its personnel by organization. This is an idea, of course, that stemmed from more classic theories and strategies in organizational development. The most obvious roots of this idea related to description of Douglas Mc Gregor's X, Y Theories. Empowerment is a commercial idea that has been realized in democratic leadership, participatory management, quality circles, and personnel's involvement in work. Nigel [13] argues that this term had been used in the relevant disciplines to political sciences, social sciences, feministic theory as well as within the grant-in-aids to Third World Nations before it was prevalent in management. The authors in this field employed term of empowerment as the meaning of providing the needed sources and tools for personnel in order to be visible for them and to use them as their materials.

During two recent decades, empowerment concept has been noticed by experts in the field of management and organizational science. Review of subject literature signifies that empowerment of human resources has been studied from three communication, motivational, and cognitive perspectives.

## **2. MATERIAL AND METHOD**

The studied population includes all educational deputies who were employed in primary schools of educational system at Tehran City. This population was selected as a sample group with size of 311 participants through multi- stage randomized sampling method out of which there were 70 males (22.5%) and 215 females (69.1%) and gender identity of 26 participants (8.4%) of them was not determined and among this group of respondents, 3 (1.0%) had high school diploma, 33 (10.6%) had AA degree, 246 (79.1%) participants had BA, and 25 (8.0%) of them had MA degree while 4 (1.3%) of them have not identified their educational degree.

Among these respondents, service records are as follows: 3 of them (1.0%) lesser then 5 years, 11 (3.5%) of respondents with 5-10 yearly services, 11 (3.5%) between 10 to 15 years, 71 (22.8%) between 15 to 20 years experiences, and 209 (67.2%) had experiences higher than 20 years while 6 respondents (1.9%) did not determined their yearly services.

In this study, a 29- question inventory is the measurement tool in which the questions of this inventory have been extracted from Speritzer's psychological empowerment questionnaire that examines 5 dimensions. As a result, some parts of the aforesaid questionnaire were changed by advisor teacher and also variable of sense of

participation with other was added to this inventory. This inventory has been drawn up with 29 questions and formulated based on LIKERT five scale (completely agree = 5; moderately agree = 4; no comment = 3; moderately disagree = 2; and completely disagree = 1).

In order to implement the project and to gather data, a sample with 311 respondents was selected. Execution of scale was done by researcher. Test was administered cumulatively in written form with pen to be completed by educational deputies. To control external effective factors on validity, test was uniformly administered and all execution steps were conducted by researcher. The needed explanations were presented to testes identically and it was tried to implement test within appropriate climate.

Data analysis was done based on research objectives and by means of descriptive and inferential statistics as follows:

1- To determine parameter of group, the prevalent techniques in descriptive statistics were adapted including frequency distribution, parameters of central tendency and dispersion parameters.

2- Reliability coefficients for questionnaires have been estimated by general formula of Cronbach's alpha.

3- To examine what factors are constructive for empowerment of deputies, Principal Component (PC) was adapted as analytical technique.

4- In order to review simple structure of questionnaire, the extracted factors have been rotated by Oblimin convolution at final stage.

### 3. RESULTS

The main purpose of this study is constructive empowerment components. To estimate reliability coefficient of checklist, Cronbach's alpha was used as general formula and total reliability was acquired as 0.956 for this 29- question system. This indicates that test is highly reliable. Questions no 17 and 11 with coefficient values of 0.75 and 0.72 have the highest correlation while questions no 7 and 3 with coefficient values of 0.43 and 0.50 have the lowest correlation to total score of this group.

The foremost question which should be purposed regarding type of measurement method is that how much this method is valid. It means that measurement tool should evaluate what it has been built for that purpose. The evidences were gathered for construct validity in this study.

There are several techniques to determine construct validity so that factor analysis is one of them. Factor analysis is a term that is used for validation and developing psychometric tools, data analysis to discover constructive factors, and contribution to formulate theory of content analysis and materials for interview, managerial styles, and occupational interests etc. [14]. Observing the following assumptions is necessary for factor analysis:

1) Sampling Adequacy Index of Kaiser- Meyer- Olkin (KMO) should be at least 0.6 and preferably higher. In this study, KMO index is 0.904 so it could justify execution of factor analysis for this survey.

2) To check up this point that data correlation matrix is not zero in this population, Bartlett Sphericity Test is utilized. The goal of executing this test is to reject null hypothesis based on which identity matrix is correct where its diagonal arrays are "1" and all of non- diagonal arrays are "0" in population (Homan, 2011). In this study, the value of statistical index in Bartlett's test is 8862.051 and it is significant at level 0.00. Thus, it may be claimed that there is correlation between variables in this population.

3) Researchers considered coefficients higher than 0.30 and often greater than 0.40 in definition of factors in order to examine the nature of relations among variables as well as acquiring definition and terminology for factors and they deemed as zero (random) the coefficient, which have been smaller than this value (Homan, 2011). In this survey, factorial load with coefficients of 0.3 was selected as acceptable factorial load; as a result, if factorial load for any question was lesser than 0.3 on all rotated factors, the given component was left out of test.

4) Each of factors should belong to three questions at least.

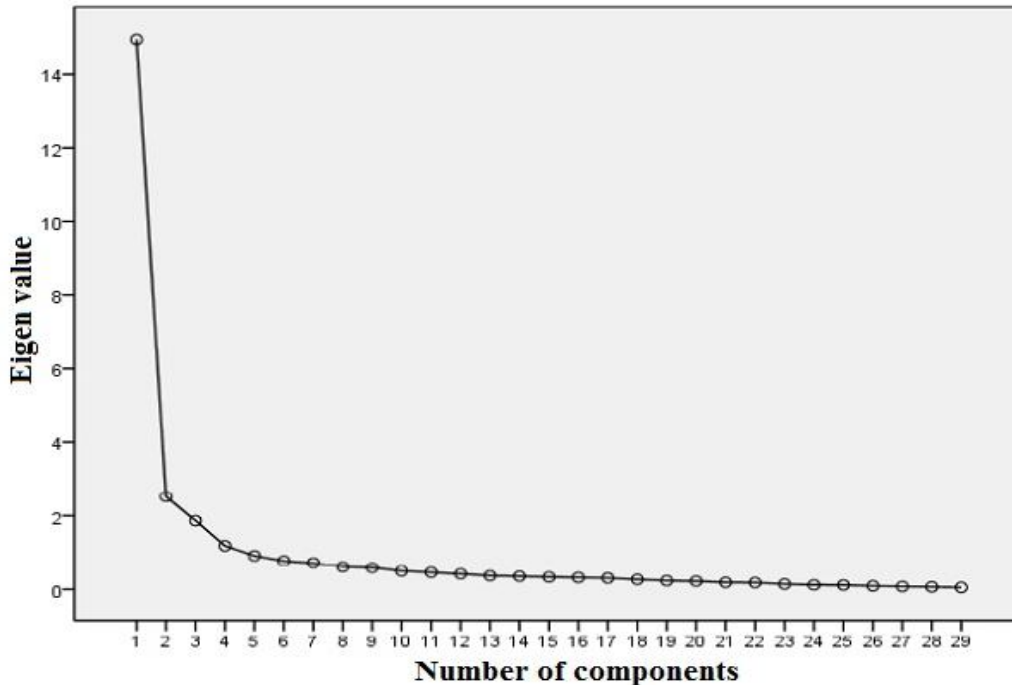
5) Factors should adequately reliable.

As it mentioned above, KMO value is 0.904 and also significance level is 0.00 for index of Bartlett's sphericity test. Thus, based on both criteria it can be concluded that execution of factor analysis will be justifiable based on the resulting correlation matrix in the studies sample group.

Execution of factor analysis for materials of well- being scale measurement has been considered three major parameters to determine rate of the saturated factors:

1) Eigen value; 2) ratio of the interpreted variance by any factor; and 3) Eigen values chart is called Scree.

The primary statistical indices which have been derived for execution of factor analysis by PC technique showed that Eigen values of 5 of the factor are greater than one. The common percentile of variance among variables for these 5 factors interpreted 74.05% of total variance for variables. 5 factors were extracted from group of questions that interpreted 74.05% of the variance. First factor with Eigen value of 14.96 may justify 51.6% of total variance.



Graph 1. Scree slope chart

Scree slope chart indicates a schema of interpreted total variance by any variable in respective of other variances. In this schema, great factor has been shown in the above and other factors are displayed together with a gradual slope. Experience has shown that if  $k$  denotes number of real numbers, Scree starts from  $k^{th}$  factor. It can be inferred from this diagram that first factor has noticeable share in total variance of variables and its role is distinguished from other factors. But chart slope removes after fifth factors and in fact leveling of chart stars from fifth factor. Given that cutoff point for convolution of factors is the place where line slope varies; thus, 5 factors are the appropriate agents by means of convolution.

The interpreted variance by these factors showed that before rotation, first factor interprets 51.6% of variance, second factor up to 8.7%, third factor 6.4%, fourth factor 4.1%, and fifth factor interpret this variance. Each of the rest factors interprets variance very slightly. Therefore, with respect to the interpreted value of variance, 5 factors were appropriate for extraction. According to the given results from execution of factor analysis, 5 factors were extracted from 29 questions so that they interpreted 74.05% of total variance of the variables. With respect to value of the interpreted variance and Scree chart for achieving a simple structure after determination of number of extractable appropriate factors, 5 factors were identified and rotated. This technique is aimed at acquiring simple structure. Thus, the acquired data for 5 factors after Oblimin convolution showed that the results approached to a simple structure after several trial rotations. Structured matrix is seen in Table 1.

The following points may be inferred from the figures in this Table.

- 1) Question no 23 has some convolution and its weight is focused on several factors.
- 2) Other questions of scale have no convolution since they have factorial load only on one factor.

Based on factor structure matrix, group of questions which were jointly correlated to a factor extracted and nominated as follows:

*First factor:* 7 questions including questions no 13, 12, 11, 17, 15, 14, and 9 that are highly correlated to this factor and they denote sense of independence.

*Second factor:* 7 questions comprise of questions no 4, 1, 3, 5, 7, 6, and 19 that are highly correlated to this factor and they denote sense of significance.

*Third factor:* 3 questions including questions no 2, 10, and 8 which show high correlation to this factor and they signify sense of competence.

*Fourth factor:* 8 questions consist of questions no 29, 16, 23, 21, 18, 20, 24, and 22 that are highly correlated to the given factor and they indicate sense of participation with others.

*Fifth factor:* 4 questions include questions no 26, 25, 27, and 28, which are highly correlated to this factor and they express sense of confidence.

**Table 1:** Structure matrix of 29- question system of empowerment scale

Question	First factor	Second factor	Third factor	Fourth factor	Fifth factor
q13	0.913				
q12	0.877				
q11	0.861				
q17	0.832				
q15	0.786				
q14	0.750				
q9	0.695				
q4		0.861			
q1		0.857			
q3		0.844			
q5		0.782			
q7		0.738			
q6		0.724			
q19		0.594			
q8			0.835		
q10			0.802		
q2			0.671		
q22				0.873	
q24				0.873	
q20				0.855	
q18				0.785	
q21				0.785	
q23				0.733	
q16				0.646	
q29				0.646	
q28					0.922
q27					0.916
q25					0.881
q26					0.873

In order to interpret scores of each of respondents, it necessitates interpreting his/ her raw scores within a scale that presents a general framework to compare scores. This scale, which called norm or standard, is intended to interpret relative status and rank of each person in an appropriate reference group. The appropriate reference group is one to which any person may be logically compared [15].

The noticeable point that should be considered before preparation of tables is that we can be assured that test is adequately valid and reliable; unless, calculation of norm tables and their application as a research tool is useless. Also in this study, percentile norm has been adapted for interpretation and expression of scores after assurance of reliability and validity of scale. Percentile for any raw score is calculated as a percentage rank that identifies person's position based on the percentage of individuals, who acquired scores lesser than him/ her. Given that research sample size is not adequately large for finding percentile within scale range so table of frequency distribution and scores cumulative percentage have been used as percentile.

#### 4. DISCUSSION AND CONCLUSION

This investigation was carried out in order to identify constructive factors in empowerment of educational principals from primary schools in Tehran city. The aforesaid questionnaire was statically analyzed after administration of empowerment questionnaire on sample group with over 311 respondents.

The acquired results from testing of reliability on empowerment questionnaire that was derived based on internal consistency indicate that group of scale questions are accurate and adequately reliable in such a way that one could trust in the given results from this test. Despite of this fact that its dependence on quantity of questions is one of major constraints of internal consistency (based on Cronbach's alpha) and also the longer a scale is the greater value this coefficient will have as well [16], so in spite of fewer number of questions for the derived coefficient, the scale in this study is still satisfactory and noticeable.

Principal component (Pc) analysis method has been used to examine which factors are constructive for empowerment. 5 factors were extracted by application of factor analysis and via Oblimin convolution where these 5 factors interpreted 74.05% of total joint variance among materials of questionnaire. Sampling adequacy was determined by means of KMO test before execution of factor analysis and also rejection of null hypothesis, based on which identity matrix was correct in this population, was proved by Bartlett's sphericity test so that it was demonstrated that execution of factor analysis was justifiable.

Factor analysis shows that first factor has the highest factorial load and its share is greater than other factors as well. The results from factor analysis characterized that this scale is adequately valid and it has been saturated from 5 factors. 23 questions, which their factorial load were focused on more than one factor, are probably complex questions and it is better to study and change them in future researches. In order to simplify the extracted factors, oblique convolution was adapted. Based on the findings derived from this study which has been according to sampling plan and statistical tests based on factor analysis and principal component analysis method and by exploitation from research history, the following results were derived regarding subject of well-being.

First factor with 7 questions includes concept of independence. Review of findings [17, 18, 19] confirms that empowered individuals do self- organization. Self- organization means individual's feeling about right of choice and pioneering in adjustment of activities that denote independence. Some examples of this subject consist of making decision regarding methods of doing tasks or determining rate of effort in doing of activities. Similarly, empowered persons deem oneself as active individuals and self-starters. They can make innovative measured by their own desire, make decisions independently, and test new ideas.

Sense of significance (with 7 questions) denotes second factor. Review of research literature shows that empowered individuals feel sense of significance and they attach importance for the objectives that they try to achieve. There is homogeneity among their ideals and standards with what is doing and this action is considered important in their valuation system. In fact, significance comprises of adjustment among requirements of role and job with personal beliefs, values, and behaviors without considering organizational compelling and individuals tend to make effort for those goals that make sense for them. Personnel really prefer to work with those persons, who share in similar values with them [20].

Third factor is correlated to 3 questions and it contains sense of competence. This factor is complied with comment of Vaten and Kameron [7] (1998). According to their view, the empowered individuals are those ones, who feel sense if self- efficacy or feel that they have the needed ability and proficiency to do a task successfully. Enabled persons not only feel sense of competence but they have sense of confidence based on which they can do a work adequately [21]. They feel sense of personal superiority and argue that they could convert challenges into opportunities in order to learn from it and to upgrade those persons [22].

Fourth factor with 8 questions denotes sense of participation with others. This factor verifies findings from Quinn and Speritzer [23], who presented empowerment in two approaches. Organic attitude is one of these two approaches that consider empowerment as risk-ability, developing and creation of changes, recognizing personnel's need, and building a team to encourage individuals to do participatory works and confirmation of personnel's performance. According to viewpoint from Schutz, empowerment is also the perfect participation of personnel and directors in decision making.

At last, fifth factor with 4 questions includes sense of confidence. Vaten and Kameron [7] argue that they are treated fairly and honestly. These persons believe that even in subordinate position, final result of their activities will not be damaged and tarnished as well but they shall be proper and intact. They are assured that owners of power and authority will treated them objectively. Nevertheless, under the conditions when powerful persons reflect no honesty and flexibility, empowered persons maintain their personal confidence typically. In other words, confidence means sense of occupational security. Also confidence signifies implicitly that personnel put them in a vulnerable situation. Consequently, enabled persons believe in that they will not finally encounter any damage as a result of confidence.

Raw score for any factor and total score of tastes were calculated for finding empowerment norm. Tables of frequency distribution for any factor and total questionnaire were prepared.

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