ISSN (Print): 0972-4397
ISSN (Online): 0974-0805
Journal of Ecophysiology and Occupational Health, *Vol 18(1&2), DOI 10.18311/jeoh/2018/21320, 12-17, January-June 2018*

A Comparative Study of Job Motivation and Work Engagement among Teachers Working in Smart and Ordinary Middle and High Schools in Parsabad

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Abstract

The present study was carried out in order to compare job motivation and work engagement among teachers working in smart and ordinary middle and high schools in Parsabad, Ardabil province, Iran. The present study was an applied experiment with regard to its aim, and a causal-comparative non-experimental research regarding the method of data collection. The statistical population of the present study included all teachers working in (smart and ordinary) middle and high schools in Parsabad in the academic year of 2016-17. Morgan table was used to select 60 teachers working in smart schools and 235 teachers working in ordinary schools by a stratified random sampling method. In order to collect the required data, Schaufeli and Bakker Work Engagement Questionnaire (with Cronbach's Alpha of 0.82) and Hackman and Oldham Job Motivation Questionnaire (with Cronbach's Alpha of 0.79) were utilized. T-test was used to analyze the collected data. The results of the study showed that there was a significant difference between teachers working in smart and ordinary middle and high schools of Parsabad in terms of job motivation and work engagement, such that teachers of smart schools had a higher level of job motivation and work engagement than those working in ordinary schools. The results also indicated that the mean scores of job motivation and work engagement components were higher among teachers of smart schools than ordinary schools.

Keywords: Job Motivation, Smart Schools, Schools of Parsabad, Work Engagement

1. Introduction

Entrance to information age and the spread of Internet- and computer-based technologies have led to the emergence of new formal and informal learning environments. Late in the 1960s, the emergence of smart schools as a part of learning assistant systems for learners deprived from education in developed countries such as the UK and the USA created new learning opportunities[22]. However, the term "smart school" does not have a long history in the literature of our education, but valuable despite sporadic activities have been done in this field. Inspired by religious teachings and time requirements, Ministry of Education has attempted to define the structure, place, organization, conditions, and regulations of developing smart schools based on international scientific criteria and local conditions in the country in order to achieve Iran's Perspective Document in 2026. Therefore, in order to achieve this goal, additional effort is needed. Among the main components of this effort, one can refer to attitude change in education method and management of educational centers and provision of the required infrastructure[9].

Smart school is a physical school whose control and management are based on computer and Internet technologies, the content of most lessons is electronic, and its evaluation and supervision system is smart[17]. In such schools, a smart student changes and develops his/her resources and performance by constantly spending time on subjects, and this is what enables the school authorities to prepare the students to acquire new information given the changes and increases in the students' information level[24], and this factor in turn can affect the teachers' job motivation and work engagement. Work engagement is the level of favorable interest in, passion for, and attachment to the job[20]. Hallberg and Schaufeli (2006) defined work engagement as a positive psychological concept which is known as well-being index and psychological health in workplace. Teachers that are eager to work are characterized by low

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neuroticism, and high extraversion and[13]. In such conditions and environments, teachers and employees will have creativity and initiative. They react to actions, and their self-efficacy rises as a result of their work engagement, which help the organization achieve its[15]. According to the model proposed by Schaufeli et al (2002), work engagement has three dimensions of absorption, vigor, and dedication.

1.1 Absorption

In this condition, the individual is engaged in his/her work hard because work experience is very enjoyable. Here, individuals are willing to pay the price.

1.2 Vigor

Employees that are highly capable are motivated by their own work. They show more resistance in the face of problems and interpersonal conflicts.

1.3 Dedication

This dimension of work engagement is characterized by the employee's intense psychological involvement and is a combination of feeling of significance, enthusiasm, and challenge. This dimension has a lot in common with the concept of job involvement, and refers to the degree of the individuals' psychological dependence on their job[18]. Moreover, job motivation has conceptual overlap with work engagement. Motivation is one of the most complicated issues in organizational behavior to which management authors have proposed numerous definitions. Motivation is a set of forces that cause an individual to act in special ways. It refers to a degree of readiness of an organism. It is designed to pursuit a number of goals. Individuals' motivation depends of the intensity of motivators. It is a factor that forces living creatures to do different activities and spend different levels of energy. In practice, motivations are the individual's internal forces that make him/her overtly do certain activities. On the other hand, manpower is the most important resource in each organization. Ministry of Education is one of these organization. Every country needs motivated and efficient teachers to teach the youth within its educational system and prepare them for a better future[21]. Motivation is one of the most significant predictive variables of positive occupational attitudes and favorable individual and organizational performance. Job motivation is a set of forces of efficiency that originate within and beyond the individual's existence so that it can be the initiator of work-related behavior, and decides the shape, direction, intensity, and continuation of the work[1].

The results of some studies (Tondeur, 2008; Keshavarz, 2013; Madadshahi, 2013; Jamshidi, 2014) showed that there are differences between teachers working in smart schools and ordinary schools. However, not many studies have yet focused on the effect of making schools smart on the teachers' job motivation and work engagement; which is possible by comparing the teachers of these two types of school. Moreover, in Iran, according to the enactments of Information Technology Council of the Ministry of Education, smart schools started running in the academic year of 2004-2005. Although smart schools have increasingly spread, there are few studies in this regard, which necessitates the conduction of the present study. Therefore, the present study was carried out in order to compare teachers working in Parsabad's smart and ordinary high and middle schools in term of their job motivation and work engagement.

2. Method

The present study was an applied experiment with regard to its aim, and a causal-comparative non-experimental research regarding the researcher's control over the variables. The statistical population of the present study included all teachers working in (smart and ordinary) middle and high schools in Parsabad in the academic year of 2016-17 (71 teachers of smart schools and 605 teachers of ordinary schools). Morgan table was used to select 60 teachers working in smart schools and 235 teachers working in ordinary schools by a stratified random sampling method. In order to collect the required data, Schaufeli and Bakker Work Engagement Questionnaire and Hackman and Oldham Job Motivation Questionnaire were utilized. After the required data were collected, they were encoded based on the measurement scales and analyzed using SPSS. First, the normality of the data was tested using Kolmogorov-Smirnov test. According to the normality of the data, T-test was run to analyze the hypotheses.

3. Instrumentation

3.1 Work Engagement Questionnaire

This questionnaire was designed by Schaufeli and Bakker in 2003. It is a self-report questionnaire including 17 questions,measuring three subscales of vigor, dedication, and absorption. It is scored using a 7-point Likert scale in which each item is given a continuum of never (0) to always (6). Schaufeli and Bakker reported Cronbach's Alpha for the whole questionnaire as 0.91-0.96, and for the subscales of vigor, dedication, and absorption respectively 0.83-0.90, 0.88-0.95, and 0.70-0.88. In the present study, the reliability of the questionnaire was estimated as 0.82.

3.2 Job Motivation Questionnaire

This questionnaire was designed by Hackman and Oldham (1980). It is scored based on a 7-point Likert scale (Completely disagree: 1, Disagree: 2, Disagree a little: 3, Neither agree nor disagree: 4, Agree a little: 5, Agree: 6, and Completely agree: 7). It has 5 components: 1. Skill variety, 2. Job identity, 3. Job importance, 4. Independence, and 5. Job feedback (Madadshahi, 2013). In the present study, the reliability of this questionnaire was 0.79.

4. Results

According to the results of the present study, 61.69% of the teachers were men, 58.35 had a bachelor's degree, 43.05% aged 36-40 years, 75.6% were married, and 28.81% had a work experience of 11-15 years. The highest frequency of work experience was related to 11-15-year work experience in the ordinary schools and 16-20 years in the smart schools.

Table 1. Statistics related to work engagement and its dimensions in the two groups

Variable	Group	N.	Mean	SD
Vigor	Ordinary	235	20.89	3.59
	Smart	60	22.11	3.18
Dedication	Ordinary	235	17.50	3.38
	Smart	60	19.68	3.28
Absorption	Ordinary	235	25.31	4.77
	Smart	60	27.45	4.53
Work engagement	Ordinary	235	64.84	5.478
	Smart	60	69.26	7.17

According to Table 1, frequency distribution of work engagement among teachers working in ordinary and smart schools was respectively 64.84 and 69.26. The subscales of vigor, dedication, absorptionwere 20.89 and 22.11, 17.5 and 19.68, and 25.31 and 27.45 among the ordinary and the smart teachers, respectively.

Table 2. Statistics related to job motivation and its dimensions in the two groups

Variable	Group	N.	Mean	SD
Skill variety	Ordinary	235	12.78	2.55
	Smart	60	15.11	2.93
Job identity	Ordinary	235	12.04	1.98
	Smart	60	12.94	2.92
Job importance	Ordinary	235	12.11	2.81
	Smart	60	13.85	2.68
Independence	Ordinary	235	11.97	3.12
	Smart	60	13.85	2.93
Job feedback	Ordinary	235	12.10	2.61
	Smart	60	13.33	2.80
Job motivation	Ordinary	235	60.92	5.67
	Smart	60	69.10	8.46

According to the data presented in Table 2, frequency distribution of job motivation among teachers working in ordinary and smart schools was respectively 60.92 and 69.10. The subscales of skill variety, job identity, job importance, independence, and job feedback were 12.78 and 15.11, 12.04 and 12.94, 12.11 and 13.85, 11.97 and 13.85, and 12.10 and 13.33 among the teachers working in ordinary and smart schools, respectively.

Table 3. Normality test (Kolmogorov-Smirnov test) of the data distribution

Statistics/ Variables	N.	K-S statistics	Sig.
Work engagement	295	1.160	0.057
Job motivation	295	1.16	0.057

The results of Kolmogorov-Smirnov test are presented in Table 3. According to the significance level, using parametric test is permitted.

Table 4. Independent samples t-test for job motivation among the two groups

Variables	Group	Mean	N.	Mean difference	t	df	P
Skill variety	Ordinary	12.78	235	2.320	6.075	293	0.001
	Smart	15.11	60				
Job identity	Ordinary	12.04	235	0.907	2.841	293	0.005
	Smart	12.94	60				
Job importance	Ordinary	12.11	235	1.735	4.310	293	0.001
	Smart	13.85	60				
Independence	Ordinary	11.97	235	1.879	4.201	293	0.001
	Smart	13.85	60				

Variables	Group	Mean	N.	Mean difference	t	df	P
Job feedback	Ordinary	1.10	235	1.331	3.469	293	0.001
	Smart	13.33	60				
Job motivation	Ordinary	60.92	235	8.17	8.914	293	0.000
	Smart	69.10	60				

Table 5. Independent t-test for job engagement and its components in the two groups

Variables	Group	Mean	N.	Mean difference	t	df	P
Vigor	Ordinary	20.89	235	1.223	2.402	293	0.017
	Smart	22.11	60				
Dedication	Ordinary	17.50	235	2.178	4.475	293	0.001
	Smart	19.68	60				
Absorption	Ordinary		235	2.13	2.067	293	0.040
	Smart		60				
Work engagement	Ordinary		235	5.54	7.645	293	0.000
	Smart		60				

According to Table 5, there is a significant difference between the teachers working in ordinary and smart schools in terms of job motivation and its components, such that teachers working in smart schools had a higher mean job motivation than those working in the ordinary schools ($p<0.05$).

According to the results presented in Table 5, there was a significant difference between the smart and ordinary teachers in terms of work engagement and its components, such that teachers working in the smart schools had a higher level of work engagement and its components than those working in the ordinary schools ($p<0.05$).

5. Discussion and Conclusion

The present study was carried out in order to compare teachers working in smart and ordinary middle and high schools in terms of job motivation and work engagement in Parsabad, Ardabil, Iran. The results showed that there was a significant difference between the two groups in terms of job motivations and its components, such that teachers working in the smart schools had a higher level of job motivation and its components than those working in the ordinary schools ($p<0.05$).

The results of the present study are in agreement with those of the studies conducted by Bangi (2010), Lippold and Greenberg (2011), Fardian (2012), Keshavarz (2013), Madadshahi (2013), Jamshidi (2014), and Kordinezhad (2014).

In his study, Keshavarz (2013) compared creativity and job motivation among teachers working in smart and ordinary schools and concluded that the former group obtained higher scores on job motivation and strategies of electronic teaching of creativity.

Madadshahi (2013) compared job motivation and goal orientation among smart and ordinary primary schools in Kashan and showed that there was a significant difference between the two groups of the teachers in terms of their job motivation and goal orientation. In other words, the teachers working in the smart schools obtained higher scores of their job motivation (and its components) and goal orientation than those working in the ordinary schools.

In a study entitled, "Comparing work engagement and development of innovative behaviors among teachers of smart and ordinary schools", Jamshidi (2014) showed that more innovative behaviors developed among the teachers working in the ordinary schools than the smart ones. However, the teachers of the smart schools had higher work engagement that those working in the ordinary schools.

In a study, Bangi (2010) compared the effect of technological change in smart and ordinary schools on the Malaysian teachers' job motivation and indicated that the teachers of both schools (smart and ordinary) were satisfied with technological change. The results of the second part of the study showed that the teachers working in the smart schools had a higher level of job motivation compared to those working in ordinary schools.

In justifying this finding, it can be stated that existence of appropriate educational facilities including access to the Internet, video projectors, computers, and so on for the students and teachers causes the teachers to develop their mentality about and interest in the issues at hand. Moreover, difficulty of some activities is eased and these factors have a positive effect on job motivation among teachers. Furthermore, facilities like computers, access to the Internet, and so on help teachers in such schools have a larger variety of materials and skills. In smart schools, in addition to responding to the students' questions, teachers can also introduce a complete Internet source to them or ask them to collect more materials about the issue from the Internet and present in class, and this factor plays an effective role in their job identity. Moreover, teachers working in smart schools always have access to more information relevant to the issues discussed in class. Existence of e-learning

facilities provides students with more appropriate and convenient presentation of materials, which leads to an increase in job feedback among teachers in smart schools.

Another part of the results showed that there was a significant difference between the two groups of the teachers in terms of work engagement and its components, such that theteachers working in the smart schools had a higher mean of work engagement than those working in the ordinary schools ($p<0.05$).

The results of the present study were in line with those of the studies carried out by Lippold and Greenberg (2011), Kordinezhad (2014), Golxan and Van Door (2014), and Babazadeh (2016). Golxan and Van Door compared job motivation and satisfaction among teachers working in smart and ordinary school in Izmir, Turkey. They showed that there was a significant difference between the smart and ordinary school teachers with regard to their job motivation and satisfaction, such that the teachers working in the smart schools obtained higher scores on job motivation and satisfaction that those working in the ordinary schools. Lippold and Greenberg (2011) compared the effect of technology (related to smart schools) on job motivation among teachers working in schools with and without technological facilities and showed that job motivation was higher among the teachers working in smart schools than those working in ordinary schools. Kordinezhad (2014) compared work engagement and organizational commitment among teachers working in smart and ordinary middle schools in Sanandaj, Iran. She concluded that the teachers working in the smart schools received higher scores on work engagement and its components compared to those working in the ordinary schools. Moreover, the teachers of the smart schools had higher scores on the components of attitudinal commitment and normative commitment.

In justifying this finding, it can be stated that when schools provide their teachers with appropriate equipment and facilities, they will spend more time on working with students, and in fact, they dedicate themselves more to their job. Moreover, existence of proper facilities and conditions which are available more in smart schools will cause the teachers to become more vigorous and attracted to such schools.

6. Practical Suggestions

1. In-service training programs need to be developed in order to familiarize teachers with working in smart schools.
2. Ministry of Education should take necessary measures in order to create appropriate grounds (hardware and software) to make schools smart.
3. Necessary advertisement should be developed in order to encourage the students' parents to cooperate to help the program of making schools smart through the radio and television and other mass media.

7. Study Limitations

1. The statistical population of the present study consisted of all teachers working in ordinary and smart middle and high schools on Parsabad, which was one of the limitations of the present study.
2. Using questionnaires alone as data collection instrument was another limitation of the present study.
3. Another limitation of the present study was boredom and low willing of some respondents while completing the questionnaire.

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