



## EXAMINATION OF INNOVATION SUFFICIENCY OF MANAGERS WORK IN PHYSICAL EDUCATION AND SPORTS EDUCATION INSTITUTIONS IN TERMS OF ACADEMICIANS

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### Abstract:

Higher education institutes are known that they are one of the most important institutions in reaching out new information, accumulating new ideas and sharing them with the society. Especially approach to innovation by individuals who are manager at universities and their attitudes has an important key role in developing and reaching to the quality. In this context, the purpose is to examine the innovation sufficiency of managers who work in physical education and sports institutions in terms of academicians. The research groups consist of voluntarily attended 369 academicians and from them 6 are private and 20 of them are academicians at state universities at physical education and sports sciences faculties. For the acquirement of the datum related to innovation sufficiency the Innovation Sufficiency Scale, developed by Eraslan (2014) was used. In the analysis of the gathered datum, the SPSS package program was used. For reaching out the percentage, frequency distribution and the differentiation between groups the Mann Whitney-U and Kruskal Wallis Test were applied. In the examination of the sufficiency of academicians that attended to the study there were differences coincided between groups depending on their genders, working structure of their institutions, service years and their seniorities. However depending on the departments there were no meaningful difference found in the groups. But, when private and public sector academicians are considered the innovation sufficiency of

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ones, who come from another institutions or different departments, it was found at the high level when it is compared to first ones. As a result, it can be said that this can provide important conceptual support to managers and researchers who work in this field.

**Keywords:** education, innovation, academician, manager

## 1. Introduction

People who have lived in the world and since the time of the world have developed, changed and renewed movements since the ancient times. This behavior can be seen as a law of nature. Hence, from the first human beings, many situations that human beings have introduced new products, information ideas, etc. can be perceived as innovation. Innovation is derived from the Latin word '*innovatus*' and transforms an idea into a sellable or improved product or goods and services (Adigüzel, 2012, Top, 2011). In general, the word innovation means designing new services or products, using new production and presentation methods. Innovation can be mentioned in the case of uncovering something that has never been done before, or the use of something that has already been done elsewhere already in an industry chain or business can be considered as innovation (Dinçer, 1999). One of the best-known definitions of innovation is defining of "*the creation of a product, service, or process that is new to a business unit*" (Tushman and Nadler, 1986). Most of the time innovation requires to inventing of a new thing, only seeking for what people need, pre-realization and taking the steps depending on this issue (Altun, 2007).

One of the most important innovative movements in history is the Renaissance. A new world order has been created thanks to the creativity of people and their new ideas. Especially in the nineteenth century, these innovations in the countries such as England, USA and South Korea became the most important factor that triggered the industrial revolution (Ülker, 2009). In order to adapt to change in a rapidly changing world and to maintain individual, organizational and professional life, (Güngör and Göksu, 2017, Economic Cooperation Organization, 2005). The quick spread of scientific and technological developments in the world deeply affects all organizations. The way to make organizations different and productive in this process is through creativity and innovation. Organizations which adopt innovative culture and succeed in establishing this are gaining crucial acquirements in their alignment with the environment and development that they are in. In this meaning, innovation has a very important prescription for success and continuation of organizations. The most important of the

external factors occur outside the schools force institutions and education system (Erdoğan, 2012). It is possible to say that these developments are facilitated by ways of accessing information, ease of accessing many places in the world with internet and rapid development of educational technologies and parallel tendency towards digital teaching. These factors lead educational institutions to structural changes in a necessary way to protect and improve their organizational performance (Töremen, 2002). The preservation and sustainability of the socio-cultural presence of a country and the further development of the current structure, however, is of great importance. In order to gain competitive advantage in institutions, innovation works have begun to be important besides providing knowledge and successful information management (Kabakçı, 2008).

Manager is the person who is responsible for the management and they are also responsible for managing people who tend to a specific aim, in cooperation, harmony effective and productive way (Aydoğan, 2008). People who are in the responsibility of managing should have some roles that realize the managing duties. These roles are; leadership, representing, gathering and spreading information, mediation, problem solving, speakership, business ownership. Fulfilling these roles managers should have technical, theoretical (notional) and some humanistic sufficiency. The school managing is an issue that requires quite different quality and responsibility (Top, 2011). Major functions of the school managers are leadership and managing. Even though leadership and managing have a close relationship, a successful education manager should give importance to both of them. Managing duty comes from the moment that the person is promoted as a manager and taking its power from formal authority. For being accepted as a leader; the skill that give opportunity for the group reach their aim, information, his approach towards solving the problems, determination, thinking multi-aspected, understanding, explaining, predicting and judging characteristics. These are based on the integration of all of the characteristics and depended on managers' personal impression on teachers, officers, students and other workers' adoption (Yakut, 2006). School managers should make a healthy connection for both the success of education and for the success of innovation works; they need to make a good connection with education officers. School manager can make a change and innovation in teachers and students behaviors with his/her successful communication. Among the workers and students, it can be useful for the conflicts and solution of the problems. Since education is an interaction process innovation studies that are going to be done in the school the communication process is the basic need (Aksoy, 2005).

Universities are institutions that education-teaching, scientific researches and publications are done in here. Being in a gathered place of these characteristics, make

the innovation needed and mandatory for the institution. Hence, quick spreading of the innovation in this institution and enough importance should be given to innovation. In this context there is a big responsibility burdened on academicians and managers. This study was done in the aim of examination of innovation sufficiency of the managers work in physical education and sports institutions in terms of academicians.

## **2. Method**

### **2.1 Research Model**

In this research, descriptive survey model was used. Descriptive researches are in the aim of defining the related situation. The survey model is based on putting forward the existed and currently existing situation with an objective approach (Karasar, 1999). In the frame of this model innovation sufficiency of the academicians, 6 from private and 20 from public universities, were described, then related to the personal quality values of the academicians, if there is a difference or not, determined

### **2.2 Study Group**

There were 6 from private 20 from public universities 369 academicians from physical education and sports academies voluntarily attended to the study. 241 ( 65.3 %) of the academicians were male and working in public universities 128 ( 34.7 %) of the academicians were female, from public universities 318 people ( 86.2 %), working in private universities 51 people (13.8 %), managers from the institute 260 people ( 70.5 %), outside the institution 109 (29.5 %), service period is between 1-5 years 123 people (33.3 %), between 6-10 years 80 people (21.7 %), between 11-15 years 57 people (15.4 %) , 16 years and over 10 (29.5 %), physical education teachers were 134 ( 36.3 %), trainer 106 ( 28.7), managing 79 people (21.4 %), recreation were 50 ( 13.6 %) people. Besides this 26 of the participants (7.0 %) were professor, 74 of them were docent (20.1 %) docent, 80 of them were assistant professor (21.7 %), 78 of them were ( 21.1 %) instructor, 39 of them were (10.6) lecturer and 72 of them were research assistant (19.5).

### **2.3 Data Collection Instruments**

As a data collecting tool the survey technique was used in the research. In the first part of the research there are 6 questions (gender, structure of institution, field of manager, seniority, service period, department) related to demographical information of the participants. In the second part of the research there were randomly chosen academicians, 6 from private and 20 from public universities existed and for the determination of innovation sufficiency levels of the managers the Innovation

Sufficiency Scale was used. The scale was developed by Eraslan in 2014 as a master degree thesis consisted of 25 expressions and used for the determination of the innovation sufficiency of the school managers. Eraslan found the reliability values (Cronbach Alpha) of the scale like this; Sensitivity to Changing 0.86, School interaction 0.79, Outside of the school interaction 0.76, Leadership 0.87, Motivation 0.90 and the general reliability coefficient was found as 0.95. Expressions in the scale are graded in 5 Likert type. In front of each expression there are five grading existed (1= I absolutely do not agree, 5= I absolutely do not agree)

### 2.4 Data Analysis

The Innovation Sufficiency of the school managers the gathered datum was analyzed with statistical package program (SPSS.22) the results were interpreted. Firstly, for having an idea about other group questions and demographical information the arithmetical average, standard deviation, frequency and percentage distributions were presented in the study. For the determination of the innovation sufficiency of the managers with the relation of some demographical variances; first normality of the distributions (Kolmogorov-Smirnov) were considered then Mann Whitney-U and Kruskal Wallis Tests were applied. Results are in 95 % reliability range and the meaningfulness were evaluated i the level of  $p < 0.05$  and  $p < 0.01$ .

### 3. Findings

**Table 1:** Examination of the innovation sufficiency levels of school managers depending on the genders of academicians that participated to the study

		Gender	n	$\bar{X}$	S.d	U	P	
<b>Innovation Sufficiency Sub Dimensions</b>	Sensitivity to Changing	Male	241	3.34	1.01	12682.50	<b>0.00</b>	
		Female	128	3.65	0.97			
	School Interaction	Male	241	3.37	1.10	13577.00	0.05	
		Female	128	3.61	1.02			
	Outside of the school Interaction	Male	241	3.25	1.04	12976.00	<b>0.01</b>	
		Female	128	3.53	1.03			
	Leadership	Male	241	3.17	1.02	12865.50	<b>0.00</b>	
		Female	128	3.48	0.97			
	Motivation	Male	241	3.21	1.16	13789.50	0.09	
		Female	128	3.44	1.04			
	<b>Innovation Sufficiency</b>		Male	241	3.26	0.97	12899.50	<b>0.01</b>
	<b>General Point</b>		Female	128	3.54	0.91		
<b>Total</b>			<b>369</b>					

$p < 0.05$  \*\*  $p < 0.01$

According to Table1 there was a meaningful difference found between innovation sufficiency levels and sub dimensions of the academicians depending on the gender variance. According to gathered results there is a meaningful high level of innovation sufficiency in the female school managers than in male school managers when sensitivity to changing, outside of the school interaction and leadership levels are considered

**Table 2:** Comparison of innovation sufficiency of the school managers depending on fields of the managers of the academicians

		Field of Manager	n	$\bar{X}$	S.d	U	P	
<b>Innovation Sufficiency Sub Dimensions</b>	Sensitivity to Changing	Inside	260	3.35	1.00	11227.50	<b>0.00</b>	
		Outside	109	3.68	0.99			
	School Interaction	Inside	260	3.36	1.08	11635.00	<b>0.00</b>	
		Outside	109	3.68	1.05			
	Outside of the School Interaction	Inside	260	3.24	1.00	11079.50	<b>0.00</b>	
		Outside	109	3.60	1.08			
	Leadership	Inside	260	3.23	1.02	12859.50	0.16	
		Outside	109	3.40	0.98			
	Motivation	Inside	260	3.21	1.15	12208.00	<b>0.03</b>	
		Outside	109	3.48	1.04			
	<b>Innovation Sufficiency General Point</b>		Inside	260	3.27	0.96	11534.00	<b>0.00</b>
			Outside	109	3.56	0.92		
<b>Total</b>			<b>369</b>					

p<0.05\*\*p<0.01

According to Table 2 there was a meaningful difference found between groups in innovation sufficiency and sub dimension of the academicians' school managers depending on field of your manager variance. When results are considered according to participant academicians managers who were promoted different faculties or unit their innovation sufficiency levels were found to be higher than ones who were promote inside of the institution in the levels of school interaction, outside of the school interaction and motivation levels.

**Table 3:** Comparison of the innovation sufficiency of the school manager depending on structure of institution of the academicians

		Structure of Institution	n	$\bar{X}$	S.d	U	P	
<b>Innovation Sufficiency Sub Dimensions</b>	Sensitivity to Changing	Public	318	3.31	1.00	2816.50	<b>0.00***</b>	
		Private	51	4.32	0.36			
	School Interaction	Public	318	3.33	1.09	4139.50	<b>0.00***</b>	
		Private	51	4.22	0.59			
	Outside of the School Interaction	Public	318	3.21	1.03	3351.50	<b>0.00***</b>	
		Private	51	4.23	0.57			
	Leadership	Public	318	3.29	1.07	7127.50	0.16	
		Private	51	3.18	0.60			
	Motivation	Public	318	3.30	1.16	7402.00	0.31	
		Private	51	3.24	0.82			
	<b>Innovation Sufficiency General Point</b>		Public	318	3.29	1.01	6199.00	<b>0.00**</b>
			Private	51	3.76	0.37		
<b>Total</b>			<b>369</b>					

\*\*p<0.01\*\*\*p<0.001

According to Table 3 there was a meaningful difference found between groups in the innovation levels and sub dimensions of the academicians' school managers depending on the structure of the institution variance. When the result are considered depending on the participant academicians there was a high level of innovation sufficiency in the managers private university managers than in public university managers depending on sensitivity to changing, school interaction and outside of the school interaction levels.

**Table 4:** Comparison of the innovation sufficiency of the school managers depending on participant academicians' seniority variance

		Seniority	n	$\bar{X}$	Sd	X <sup>2</sup>	P
<b>Innovation Sufficiency Sub Dimensions</b>	Sensitivity to Changing	Professor	26	3.71	5	11.77	<b>0.03</b>
		Docent	74	3.25			
		Assistant Prof.	80	3.44			
		Instructor	78	3.68			
		Lecturer	39	3.47			
		Research Assistant	72	3.30			
	School Interaction	Professor	26	3.70	5	8.21	0.14
		Docent	74	3.21			
		Assistant Prof.	80	3.50			
		Instructor	78	3.62			
		Lecturer	39	3.45			

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	Research Assistant	72	3.37			
	Professor	26	3.64			
	Docent	74	3.18			
Outside of the School Interaction	Assistant Prof.	80	3.41			
	Instructor	78	3.51	5	9.57	0.08
	Lecturer	39	3.29			
	Research Assistant	72	3.21			
	Professor	26	3.28			
	Docent	74	3.11			
Leadership	Assistant Prof.	80	3.25			
	Instructor	78	3.44	5	6.42	0.26
	Lecturer	39	3.45			
	Research Assistant	72	3.21			
	Professor	26	3.51			
	Docent	74	3.06			
Motivation	Assistant Prof.	80	3.26			
	Instructor	78	3.52	5	10.33	0.06
	Lecturer	39	3.48			
	Research Assistant	72	3.13			
	Professor	26	3.55			
	Docent	74	3.16			
<b>Innovation Sufficiency General Point</b>	Assistant Prof.	80	3.35			
	Instructor	78	3.56	5	10.37	0.06
	Lecturer	39	3.45			
	Research Assistant	72	3.23			
	<b>Total</b>		<b>369</b>			

p<0.05

According Table 4 there was a meaningful difference between groups in the innovation sufficiency and sub dimensions of the academicians' school managers only in the sensitivity to changing sub dimension depending on seniority of academicians. When results were considered it is seen that when the sensitivity to changing levels of the school managers are examined professors and instructors' were found higher than the ones who are docent and research assistants at universities.



**Table 5:** Comparison of the innovation sufficiency of the school managers depending of the service period of the academicians

		Service Period	n	$\bar{X}$	Sd	X <sup>2</sup>	P
<b>Innovation Sufficiency Sub Dimensions</b>	Sensitivity to Changing	1-5	123	3.59	3	16.91	<b>0.00**</b>
		6-10	80	3.70			
		11-15	57	3.16			
		16 and over	109	3.25			
	School Interaction	1-5	123	3.65	3	13.42	<b>0.00**</b>
		6-10	80	3.66			
		11-15	57	3.22			
		16 and over	109	3.20			
	Outside of the School Interaction	1-5	123	3.51	3	16.11	<b>0.00**</b>
		6-10	80	3.58			
		11-15	57	3.22			
		16 and over	109	3.07			
	Leadership	1-5	123	3.28	3	5.27	0.15
		6-10	80	3.51			
		11-15	57	3.09			
		16 and over	109	3.20			
	Motivation	1-5	123	3.33	3	4.37	0.22
		6-10	80	3.47			
		11-15	57	3.04			
		16 and over	109	3.25			
<b>Innovation Sufficiency General Point</b>	1-5	123	3.45	3	9.54	<b>0.02</b>	
	6-10	80	3.58				
	11-15	57	3.13				
	16 and over	109	3.21				
<b>Total</b>			<b>369</b>				

p<0.05\*\*p<0.01

According to Table 5 there was a meaningful difference found between groups in the innovation sufficiency and sub dimensions of the participant academicians' school managers in the levels of sensitivity to changing, school interaction and outside of the school interaction sub dimensions. According to results, it was determined that academicians with low level service period consider the innovation sufficiency of the school managers at an enough level. While service period increase then it is understood that the innovation sufficiency levels of them considered as insufficient.

#### 4. Results, Discussion and Suggestions

This study was done in the aim of examination of innovation sufficiency of the school managers who work in physical education and sports academies in terms of academicians.

According to Table 1, there was a significant difference between the groups according to the gender variance in the level of innovation sufficiency and sub dimensions of the academicians' school managers. According to the results obtained, the female academicians who participated in the study found that the level of general innovation sufficiency, sensitivity to change, outside of the school communication and leadership level of the school managers were significantly higher than that of male academicians. Argon and Özçelik (2008) found that, in the research on change management in elementary schools, male teachers are more adequate than female teachers in terms of communication dimension. However, in the study of Aksoy (2005) in primary schools in his research of changing management he found the male teachers more sufficient than females in. Besides this in the study done by Canlı and others (Canlı et al., 2015) school managers' tendencies towards change differed significantly in terms of gender change. While these studies are in support of my work, there was no statistically significant difference between the gender and innovation sufficiency of teachers who participated in the study of Kurt (2016) master thesis entitled "Managerial innovation sufficiency and school culture relation". Eraslan (2014), Ozan and Karabatak (2012) and Taş (2009) found statistically significant differences between teachers' genders and innovation competencies of school principals, and it was found that according to Top (2011) it is seen that gender has not been effective in the study carried out in order to determine what attitudes related to the management. These studies do not support our work. As a result, gender variance in the sense of innovative thinking seems to be not completely determinative.

According to Table 2, there was a significant difference between the groups according to the variance of the manager's field in the level of innovation sufficiency and sub-dimensions of the academicians' school managers. According to the results, depending on the academicians participating in the study, the general innovation sufficiency levels of school managers assigned from different faculties or departments and change sensitivity, intra-school communication, out-of-school communication and motivation levels are significantly higher than the managers who are elected from within the university. It is appointed. At this point, working with the same institution or with a manager from the same department at many universities can always be problematic. Sometimes academicians may have to work with a manager outside their

field. And with the manager-academics coming from outside the field, a much different progress and work tempo can be caught. The reasons such as the fact that the manager-academics from outside the field are objective to the people and many new ideas are open because they come from outside the field may have caused such a result. In previous work on structured literature, there was no change in whether managers were from within the institution or from outside the institution.

According to Table 3, there was a significant difference between the groups according to the institutional structure variable in the level of innovation sufficiency and sub-dimensions of the academicians' school managers. According to the results, according to the academicians participating in the study, the general innovation sufficiency levels of school managers working at private universities and the sensitivity of change, school interaction and outside of the school interaction levels are significantly higher than school managers working at the public universities. In the literature study, there was no change in the structure of the institution in previous studies. However, according to the result; contractual working conditions in private universities, performance-based working principles are the result of academicians working in private universities or academicians in managerial positions to produce different works and bring out much more things in a permanent time period.

According to Table 4, there was a significant difference in the level of innovation sufficiency and sub-dimensions of the school managers of the academicians, only among the groups according to the variables of the academicians' titles in the change sensitivity sub-dimension. When we consider the results, it is seen that the professors and instructors of the academicians who have the highest degree of change sensitivity of the school managers have the professors and instructors and the academicians who evaluate the lowest degree are the associate professors and research assistants. When we consider the studies done in the literature related to the subject, it is not found that studies about the effect of the innovation variable of managers' innovativeness of managers on the innovation sufficiency were made because this work was a university oriented study. It is thought that the educational level of the teachers is close to this variable of working in the literature and it is found that the opinions of the teachers who participated in Eraslan's study about (2014) secondary school managers' innovation sufficiency in the graduate thesis of the name of the secondary school and the opinions of the secondary school managers about the innovation competencies did not change according to the educational status of the teachers There was no statistically significant difference between gender and innovation sufficiency of teachers participating in . In Kurt's master thesis about (2016) manager innovation sufficiency and school culture relation there was no statistical difference found in the innovation

sufficiency and gender of the teachers. These studies are in parallel with this study. Canlı and others (Canlı et al., 2015). the study of the school managers has found that the tendency towards change is significantly different in terms of educational level variables. The result of this work is not parallel with our study.

According to Table 5, the innovation qualification levels of the school managers of the academicians were found to be significantly different among the groups according to the variation of the academic year, the service sensitivity of the academicians in the subscales of school sensitivity, school communication and out of school communication. According to the results, the academicians whose service years are less than the school managers it was. As the duration of service increases, it is understood that the academicians think that the level of innovation sufficiency of school managers is inadequate. There is no statistically difference between seniority and innovation sufficiency of teachers who participated in Kurt's study (2016) manager innovation competency and school culture related graduate thesis, only the sub-dimension of communication within the school was noticed. Göl and Bülbül (2012) determined a significant difference according to seniority variance. Aksoy (2005) also found a significant difference in the level of motivation in his research in the group of teachers who were between the ages of 1-5 years. Younger teachers have higher expectations than managers. These studies are in parallel with this research. Teachers who participated in the study named "*Manager's Change Management Sufficiency*". In Yıldız (2012) and Eraslan's study (2014) Secondary School Managers 'Innovation Sufficiency in the graduate thesis, named secondary school managers' opinions about innovation competencies , it did not change according to the length of service of the teachers. The result of this work does not show parallel with our study.

In the light of findings of this study;

- Studies should be done with more sampling group,
- There should be studies in relation of different parameters of the innovation or should have relationship with organizational commitment, exhaustion or work satisfaction notions' prediction strength.
- For the result of the innovation, approaches of the managers work in private universities; having a higher level of innovation than public universities there should be studies done for a close approach to innovation and managers with strong belief should be selected.

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