Administrative Information Systems of Sports Organizations and its Relation to Decision Making for Board Members

Dr. Ez El-Din Mohamed Ahmed

Assistant prof., Department of Sports Administration, Faculty of Physical Education, Helwan University, Egypt.
prof.dr_ezzeldin@yahoo.com

Abstract: The current research aims to identify administrative information systems of some sports organizations and the effects of administrative information systems on decision making for board members of some sports organizations. The researchers used the descriptive (survey) approach. Participants (n=130) were purposefully chosen from board members of sports organizations. The researchers used Decision Making Scale. Results indicated that: (1) Administrative information systems help board members to take decisions in sports organizations. (2) There are modern administrative information systems in sports organizations. (3) Chairmen and board members of sports organizations understand administrative information systems.

1. Introduction:

Our modern age has witnessed a massive wave of development in information technology, telecommunication and internet. This led to major changes in all aspects of life as now a person can see what happens all over the world in a blink while he/she is sitting at his/her home. The world has become a global village or even a small house where man can see the world as if he is in the heart of the event through the internet (5: 1).

Therefore, each society should raise new generations on learning information technology skills and prepare them to face the challenges of this age. Information technology posed new burdens, roles and tasks to the educational process and organization of teacher's education. These burdens necessitate that teachers should be well-acquainted to information technology skills (3: 27)

The human factor is one of the most important resources for any organization and this resource can be increased in value through investments in improving skills and abilities in addition to improving motivation to work. Therefore, through studying individuals' behaviors in organizations we can identify their motivation, objectives, needs and expectations. Through this we can motivate individuals to work more effectively.

During the 21st century, administration became a fast-growing field in scientific knowledge and professional practices. The "administrative revolution" of modern countries during the 1940s was one of the major new issues of the 20th century that caught major attention.

Administration is a major tool for any society that can be used in activating and modernizing the society in addition to increasing its welfare through investing its human and financial resources in a better way that may achieve major objectives (1: 17).

Scientific administration is based on three axes. The first one is to improve main administrative functions. the second axis is to apply modern administrative methods. The third axis is to provide trained administrative personnel and preparing suitable atmosphere for performing administrative functions (1: 36).

Simon, Herbert (2003) indicated that any activity includes making decisions and actions. In general, it is not agreed upon that there should be an administrative theory concerned with decision making and acting at the same time. This situation may stem from the dominant belief that decision making is limited to drawing general policies. On the contrary, decision making is not limited to establishing general objectives of an organization as decision making includes all administrative aspects of an organization including taking action. Decision making is closely related to final task. Therefore, any general theory of administration should include principles of organization that grants good decision making and effective initiation as well (8: 21).

Research Problem:

Organizations work in an open society where it affects and gets affected. Therefore, they should improve their systems continuously to keep up with changes of its surrounding environment as changes in external environment provides organizations with opportunities to achieve high administrative objectives in addition to posing challenges that should be faced through suitable solutions that lead to organizational effectiveness (6: 122).

Usually, decision makers on various administrative levels face complex problems that should be decided on. This requires factors beyond human abilities to treat them correctly and quickly. Therefore, these decisions require systems of support. These systems include computer-based information systems that provide information interactions to support directors during decision making stages. These systems are used in:

- Analytical models
- Specialized databases
- Judgements and expectations of decision makers
- Interaction stages and computer simulation that support making un-structured decisions

Some experts think that systems qualified to participate in decision making support include a wide variety of computer-based systems. It includes the following systems – ordered chronologically:

- Management Information Systems
- Decision Support Systems
- Experts Systems & Artificial Intelligence
- Executive Information Systems
- Artificial Neural Networks (4: 6-7)

In sport, organizations, associations and clubs cannot achieve its goals without considering human resources that plan and implement programs and take decisions to achieve objectives.

The researchers think that the responsibility of making a decision reflects a major importance for the advance of administrative organizations in general and especially sports organizations. This is because decisions are very important for making the future and improving all aspects of the sports system. Therefore, it is important to study the aspects affecting administrative decision making in sports organizations. One of these aspects is information system and its significance in stabilizing administrative decisions and the importance of having the piece of information in time in addition to its accuracy as a decision is a human effort which is vulnerable to limitations. This led the researchers to study administrative information systems and its relation to decision making for board members of some sports organizations.

Aims:

The current research aims to identify:
1. Administrative information systems of some sports organizations
2. Effects of administrative information systems on decision making for board members of some sports organizations.

Research Questions:
1. What are the administrative information systems available in some sports organizations?

2. Do administrative information systems affect decision making for board members of some sports organizations?

Review of Literature:

Senge, peter M (1999) performed a study titled by " The fifth Discipline" to study the administrative reform of sport in China. The study aimed to identify how China redesigned the administrative systems of sport. The researcher used the descriptive approach and participants were randomly chosen. The research indicated weakness of governmental administration of sport and this caused a long-term problem that led the administrative systems of sport in China to be weak. (7)

Darman, Soliman S. (2007) performed a study titled by "Quality of Strategic Decision Support Through Neural Networks". The study investigated the use of neural networks as a tool for strategic decision making as a case study in three Iraqi universities (Baghdad – AL-MUSTANSRIA – AL-NAHRAIN). The researcher designed a neural networks system to analyze decision inputs and treat them through mathematical algorithms similar to human brain cells to take the optimum strategic decision. Results indicated that the recommended system invested knowledge efficiently in strategic decision making. It achieved optimum integration of information from a database connected to all administrative locations related to the strategic decision location (board of university).

Al-Shafee, Hassan A. & Hashish, Hamima I. (2007) performed a study titled by "Identifying factors affecting organizational change and improvement for fulfilling objectives of sports clubs". This study aimed to identify the factors affecting organizational change and improvement for fulfilling the objectives of sports clubs in addition to strategies of treating resistance to change. The researchers used the descriptive approach on a sample of (5) sports clubs (SMOUHA – SPORTING – ALETTIHAD – ALOLYMPY – DAMANHOUR GAMES). Participants included chairmen, board members, directors of sports activity and administrators (n=118). Results indicated that factors of resisting change include: factors concerning the nature of work in sports clubs like increased workloads – factors concerning employees like disagreement about the importance of change – factors concerning the change process like time requirements – factors concerning sports administration like lack of supports from higher administrative levels (2).

2. Methods:

Approach:

The researchers used the descriptive (survey) approach.

Participants:

Participants (n=130) were purposefully chosen from board members of sports organizations. Table (1) shows descriptive data of participants.

Table (1): descriptive data of pilot and main samples (n=130)

Organization	Research community	Pilot sample	Main sample	Sum of samples	Percentage
Olympic Committee	20	5	15	20	100%
Sports federations	124	10	35	45	28%
Sports clubs	176	15	50	65	27%

Data collection tools:

For data collection, the researchers used the following tools:
- Review of related literature
- Interviews
- Decision Making Scale (designed by Anwar Wagdy 1997)

Decision Making Scale:

Anwar Wagdy (1997) designed this scale to measure motives of decision making in sport and the ability of workers in this field to take decisions. The scale includes (82) items and it has a total score.

The researchers calculated reliability and validity of the scale through applying the scale to a pilot sample (n=30) (5 members of the Olympic committee – 10 board members of sports federations – 15 board members of sports clubs) from the same research community and outside the main sample.

Objectives Programming model (Sand's Decision-Making System):

Through review of literature, the researchers used the Objectives Programming Model as information acquired from participants assured that they intend to achieve more than one objective while making a decision including:
- Improving quality of products
- Maintaining environment
- Achieving social value (value add)
- Reclaiming capital as soon as possible (profit seeking)

Therefore, the recommended approach indicated the necessity to consider all objectives of the organization and to include them in evaluation process so that the process becomes more objective and suitable for its multiple objectives in providing investment alternatives.

Pilot Study:

The researchers performed the pilot study from 15-1-2016 to 25-1-2016 to re-validate the scale through applying the scale to a pilot sample (n=30) to identify the following:
- Suitability of items to chosen participants

- Suitability of items to various categories of participants
- Identifying scale duration
- Calculating reliability and validity of the scale

The researchers validated the scale as follows:

Table (1): Correlation Coefficients of items of the Decision-Making Scale (n=30)

Item	R	Item	R	Item	R	Item	R
1	*0.706	22	*0.556	43	*0.691	64	*0.716
2	*0.701	23	*0.722	44	*0.543	65	*0.610
3	*0.393	24	*0.475	45	*0.520	66	*0.688
4	*0.497	25	*0.460	46	*0.399	67	*0.510
5	*0.567	26	*0.551	47	*0.550	68	*0.515
6	*0.455	27	*0.696	48	*0.453	69	*0.655
7	*0.612	28	*0.715	49	*0.522	70	*0.705
8	*0.584	29	*0.510	50	*0.520	71	*0.731
9	*0.684	30	*0.399	51	*0.436	72	*0.508
10	*0.612	31	*0.570	52	*0.590	73	*0.726
11	*0.705	32	*0.607	53	*0.596	74	*0.500
12	*0.420	33	*0.660	54	*0.799	75	*0.488
13	*0.653	34	*0.680	55	*0.513	76	*0.455
14	*0.420	35	*0.674	56	*0.672	77	*0.472
15	*0.680	36	*0.722	57	*0.671	78	*0.477
16	*0.569	37	*0.627	58	*0.747	79	*0.732
17	*0.500	38	*0.523	59	*0.701	80	*0.402
18	*0.539	39	*0.557	60	*0.431	81	*0.385
19	*0.511	40	*0.608	61	*0.759	82	*0.500
20	*0.457	41	*0.688	62	*0.787		
21	*0.460	42	*0.586	63	*0.771		

R table value on P≤0.05 and freedom degree of 28 = 0.306

Table (2) indicated that correlation coefficients on P≤0.05 are very high. This indicates the scale's reliability**.**

Table (3) indicated that R calculated value = 0.978 which is higher than its table value. This indicates the scale's reliability.

Main Study:

After calculating the scale's validity and reliability, the researchers applied the scale to the main sample consisting of board members of the Egyptian Olympic Committee, some sports federations and some sports clubs from 1-2-2016 to

25-2-2016. After that the researchers tabulated data to treat it statistically.
Statistical treatment:

The researchers performed the following statistical treatment calculations to treat data statistically: mean – SD – median – squewness

Table (3): Reliability of Decision Making Scale with Cronbach's Alpha (n=30)

Mean	SD	Variance	Squewness	Kurtosis	Cronbach's Alpha	Significance
250.63	41.697	1738.65	-.286	-.990	.978	Significant

R table value on P≤0.05 and freedom degree of 28 = 0.306

3. Results:
Table (4) showed the following:

- Mean, median, SD and squewness values of participants' responses.
- Squewness values ranged from 1.370 to 1.197

Table (4): Scores of participants on the Decision-Making Scale (n=100)

No.	Item	Mean	Median	SD	Squewness
1	Taking the suitable alternative decision	3.360	4.000	0.797	-0.867
2	Ability to make a decision is imbedded in the total values of situations	3.400	4.000	0.765	-0.965
3	Decisions are based on objectives	3.430	4.000	0.742	-0.889
4	Decisions are implemented through the granted authority of a decision maker	3.410	4.000	0.792	-1.001
5	When an individual faces a situation or problem he/she identifies its aspects	3.400	4.000	0.778	-1.101
6	When you face a specific situation, you can solve it through one approach for all situations	2.580	2.000	0.793	0.288
7	Information can be modified before use in decision making	2.700	2.000	0.881	0.450
8	Relation of information to situation can be identified through categorizing information sources	3.040	3.000	0.680	-0.049
9	Results of a decision depend on type of communication in the organization	3.220	3.000	0.894	-0.797
10	Information can be changed before use in decision making	2.220	2.000	1.243	0.438
11	A decision can be executed through personal communication	2.490	2.000	0.717	0.621
12	Time is critical for decision making	3.430	4.000	0.819	-1.062
13	Executing a decision through office work is the best way	3.170	3.000	0.711	-0.258
14	Dialogue and discussion elements for decision making	3.520	4.000	0.731	-1.018
15	Delegation of a higher authority to take a decision is a decision-making style	2.460	2.000	0.730	0.775
16	Discussion for decision making is a successful method	3.390	4.000	0.737	-1.077
17	Identification of a situation or a problem is a decision-making skill	3.550	4.000	0.701	-1.255
18	Personal aptitude is a leadership skill for decision-making	3.360	3.000	0.703	-0.639
19	When a person faces a problem he/she identifies its causes	3.350	3.000	0.687	-0.583
20	Strong character affects decision results	3.430	4.000	0.714	-0.851
21	Leadership qualities affects decisions	3.400	4.000	0.710	-0.758
22	A decision maker takes responsibility of wrong decisions	3.260	4.000	0.927	-0.777
23	Lake of information decreases trust in decisions	3.430	4.000	0.794	-0.936
24	Practical experience is main reason for successful decision	3.510	4.000	0.688	-1.076
25	Democratic leadership is the best leadership style	3.430	4.000	0.819	-1.286
26	Individuals' unwillingness to cooperate lead to lack of information	3.340	4.000	0.831	-1.142
27	Internal rules and regulations lead to bad communication	1.590	1.000	0.922	1.307
28	Lots of signatures hinder decision making	2.460	2.000	0.881	0.666
29	Psychological status affects the administrative decision	2.910	3.000	1.137	-0.617
30	Psychological emotions are direct causes for bad decisions	3.080	3.000	0.917	-0.400
31	Risk taking is important in decision making	2.770	3.000	1.108	-0.482
32	Choosing solution is affected by internal and external factors	2.900	3.000	1.132	-0.523
33	Hesitation appears when a person is forced to make a decision	2.700	3.000	1.114	-0.227
34	Leadership position affects decision making	2.350	2.000	0.998	0.548
35	Tendency to specialty is a behavioral issue in identifying causes of a problem	2.780	3.000	1.020	-0.298
36	Decreases complains is an advantage of participation in decision making	3.130	3.000	0.733	-0.365
37	Public opinion trends are critical for problem solving	2.930	3.000	0.912	0.059
38	Hesitation in decision making reflects inability to identify objectives	2.960	3.000	1.004	-0.407
39	Good decisions depend on clear identification of problems	3.510	4.000	0.674	-1.046
40	For some, a good decision should not lead to disagreements with others	3.040	3.000	0.723	-0.223
41	A decision depends on the situation	3.200	3.000	0.696	-0.476
42	Effective decision making depends on eliminating solutions that break the rules	3.320	3.000	0.763	-0.895
43	Executing a decision depends on autonomy	1.590	1.000	0.985	1.487
44	An individual identifies causes of a problem or a situation	3.320	3.000	0.750	-0.751

No.	Item	Mean	Median	SD	Squewness
45	Rules and regulations are used to face a specific situation	3.330	3.500	0.779	-0.917
46	Gathering information for a decision depends on autonomy	2.280	2.000	0.865	0.850
47	An individual executes his decisions through a plan	2.940	3.000	0.776	0.104
48	Value of time in a decision depends on its significance	3.480	4.000	0.771	-1.075
49	Voting is the suitable approach for decision making	3.500	4.000	0.745	-1.120
50	Annual administrative evaluation is a criterion for good decisions	3.280	3.000	0.739	-0.501
51	Varity of values and beliefs are elements of decision making	2.470	2.000	0.731	1.055
52	Discussion for decision making depends on stimulating emotions	2.130	2.000	1.011	0.629
53	Analyzing a situation or a problem is a personal decision-making skill	3.410	4.000	0.853	-1.103
54	When facing a problem, a person thinks of its manifestations	3.330	4.000	0.841	-0.691
55	Knowing organization's rules and regulations is critical in decision making	3.530	4.000	0.731	-1.213
56	Successful decision depends on training efficacy	3.210	3.000	0.756	-0.514
57	Decreased trust in pervious decisions is due to continuous changes in rule and regulations	2.780	3.000	1.059	-0.169
58	The human model is one of best administrative methods	2.200	2.000	0.738	1.197
59	Full information for decision making cost a lot	2.510	2.000	0.893	0.446
60	Lack of information results from lack of experience among information collectors	3.150	3.000	0.783	-0.400
61	Communication process depends on orders	3.060	3.000	0.850	-0.316
62	Trust can be improved among all administrative levels through changing rules and regulations	2.840	3.000	0.837	0.311
63	Successful decisions can be measured through the organizational position of an individual	3.050	3.000	0.770	-0.086
64	Variety of aspects of a problem represent difficulty for decision makers	3.300	3.000	0.717	-0.518
65	Different attitudes and trends of individuals can be faced through different ways of interaction	3.300	3.000	0.745	-0.552
66	Knowing people is a quality of a good decision maker	3.140	3.000	0.791	-0.256
67	Bias and discrimination affect decision making	3.470	4.000	0.702	-1.138
68	Various aspects of a problem increase decision making difficulty	3.220	3.000	0.675	-0.296
69	Changing dominant organizational relations improve decision making	3.120	3.000	0.742	-0.196
70	The department that takes a wrong decision takes full responsibility about it	3.120	3.000	0.819	-0.339
71	Bad relations decrease trust in previous decisions	3.400	4.000	0.681	-0.702
72	Hesitation in making a decision may result from the lack of self-confidence	3.360	3.000	0.643	-0.733
73	Coherent leader-follower relationship is an advantage of good decision making	3.460	4.000	0.642	-0.781
74	A specific situation in an organization can be faced through various approaches	3.370	3.000	0.645	-0.532
75	Responsibility of wrong decisions fall on the department that takes them	3.200	3.000	0.765	-0.772
76	Psychological factors increase trust among administrative levels	3.340	3.000	0.741	-0.795
77	Bad decision results from not knowing all alternative solutions	3.310	3.000	0.720	-0.710
78	Successful decisions depend on others' participation	3.300	3.000	0.771	-0.981
79	Dictatorial style may be suitable in some departments	1.960	1.000	1.205	0.784
80	Governmental arrangement my hinder decision making	3.140	3.000	0.804	-0.379
81	Preconceptions affect decision making	3.200	3.000	0.666	-0.250
82	Sharing with others leads to successful decisions	3.370	3.000	0.630	-0.481

Table (5): correlation coefficients among administrative information systems and the decision-making scale (n=100)

Information System	Decision making	Significance
Administrative information systems	0.22*	Significant
Decision support systems	0.24*	Significant
Executive information systems	0.36*	Significant
Expert Systems & Artificial Intelligence	0.17	Non-significant

R table value on P≤0.005 and freedom degree of 98 = 0.173

Table (5) indicated that:
- Correlation coefficients ranged from 0.17 to 0.36
- Correlation coefficients between first and third systems ranged from 0.22 to 0.36 and are statistically significant
- Correlation coefficient for the fifth system was 0.17 and was not statistically significant

4. Discussion:
Table (4) showed statistical description of participants on the decision-making scale. Squewness values ranged from 1.370 to 1.197.

Table (5) showed correlation coefficients of administrative information systems. Correlations ranged from 0.17 to 0.36. for the first and third systems, correlations were 0.22 and 0.36 and were statistically significant while for the fifth system

correlation was 0.17 and was not statistically significant.

The researchers think that this is a logical result as board members of sports organizations do not have enough awareness of experts' systems and artificial intelligence. The researchers think that this is due to the fact that the required information for artificial intelligence does not concern officials in sports organizations and is not significant in positive decision making. The researchers think that decisions become more consistent when it is coherent with team work as each member of the board knows his own role, specialty and understanding of his expectations in addition to following administrative instructions and work methods according to modern administrative information systems.

In addition, the researchers think that these results are due to the fact that when the chairman is fully aware of modern administrative information systems he can provide other board members with opportunities to participate in decision making. Furthermore, when board members are connected to and participative in modern administrative information systems they can help making positive decisions.

Conclusions:
1. Administrative information systems help board members to take decisions in sports organizations.
2. There are modern administrative information systems in sports organizations.
3. Chairmen and board members of sports organizations understand administrative information systems.

Recommendations:
1. Administrative information should be stored in a set of systems
2. Administrative information systems should be categorized according to administrative tasks related to information required in different departments so as to be accurate.
3. Recording the possibility of measuring results and identifying its causes
4. To avoid mistakes in gathering, categorizing and analyzing information, researchers should be encouraged to perform more studies according to modern scientific trends.
5. It is recommended to improve network systems according to information updating

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12/25/2016