

Getting the Academic Management Concept More Practically Perceived: An Epistemologically-Extended Approach

Dr. Amgad Hamed Omara *

**PhD in Business Administration
University of Lincoln, England**

(*) Dr. Amgad is working as an academic staff in the BA Dept., Menoufia University, Egypt. His qualifications contains; BSc and MSc in BA - Menoufia University, Egypt and MPhil in BA and PhD in Investment Banking - University of Lincoln, England, United Kingdom. The author has developed a new theory concerning the role of investment banks in the third world countries. His research area of interest is extended to cover BA, HR, OB, CB, SM, PM, MR, and Research Methodology.

Abstract:

Despite of the widespread management practicing everywhere in organizations, a grantee that this practicing was always correctly occurred has never been established. The justification to such an argumentative issue was too much hub revolving around the managerial background of the organizations' managers. Do all practitioners of management are originally specialist and/or well qualified in this area? Whether the answer is far logically no, do the organizations administered by those who are management non-specialist practitioners could effectively perform to the extent that may allow them to play their role as it is expected? Answering these questions, this research is striving to facilitate presenting the correct managerial knowledge and/or concept to those managers who are management non-specialists. Fulfilling this task it highlights the role to be done by epistemology, as the field of knowledge that's tackling the knowledge philosophy, origins, limits, foundations and sources so as to specify, by the use of knowledge sufficiency/insufficiency criteria, to what extent the espoused knowledge is true or false. In other words, the research focus was to replace the incorrect concept of management, that's espoused by management non-specialist practitioners based upon their own opinions rather than the sufficient knowledge, with an academically correct one that's based upon a sufficient knowledge of the area. As so, within the context of a methodical framework a literature review has to be conducted for theoretically justifying the research subject by showing somehow the negative gap to fill up. At the same direction an exploratory study was conducted first for showing that the governmental hospitals' failure to play the role expected by them, second for initially showing that this most probably occurs due to their top managers' non-adoption to the correct management concept. A conceptual framework has been constituted to build a theo-hypothetical model. The concern was statistically testing a path of two interrelated hypotheses. One was to examine the relation between the failure of these hospitals to play the role expected by them and the non-adoption of their top-managers to the academically correct concept of management. The other was to examine whether the non-adoption of the top-managers to the academically correct concept of management is due to their need to get this concept epistemologically simplified rather than specifically specialized one or not. This was taken place through an empirical study, within which a stratified random sample of (214) sampling units, or doctors who are top-managing the above mentioned governmental hospitals, has been targeted, as representatives of a geographically distributed homogenous research population of (539) individuals. Statistically verifying the correction of these two hypotheses it was concluded that there is a shortage in providing simply this concept to be easily considered. Particularly by those managers who are management non-specialist practitioners. The recommendation was basically to turn the attention of management authors to the use of epistemology for easily presenting the management concept, so as to get it more practically perceived and as a consequence widely adopted.

Keywords:

Trying versus repeating, exploiting versus using, human versus non-human resources, technical versus behavioral functions, original versus derivative activities, means versus objectives, changeable versus changing environment, efficiency versus optimality, effectiveness versus success, feasible versus available, so as to versus to, through versus by, practicing versus experiencing, organizational versus individual, first versus last, and epistemology versus management.

Introduction:

The call, for long, to have a reality-fitting management concept was theoretically met by a large body of research. However the efforts made in this area were more often than not restricted within the management specialization-loop. That's why these attempts unfortunately were insufficient reason for practically achieving the widespread of the academically correct management concept and/or knowledge.

In management thought, there were too many undeniable indications that management as field of knowledge or discipline has always been utilizing some other fields of knowledge such as; psychology, sociology, anthropology, and others. This has been observably occurred throughout the evolutionary constitution of the field knowledge and concepts.

Even though, there was a lack of research work, that's seriously conducted for utilizing the other fields of knowledge in practically facilitating the communication and prevalent of this concept. In other words, benefiting from other fields of knowledge in communicating this concept was unequal to utilizing them before in constituting it.

This research is substantially concerned with participating in the filling up of such a theoretical gap. It is precisely focused on using epistemology to communicate the management concept, through making it easily considered and being extensively well-known. Particularly by those who are management non-specialist practitioners.

Thus, the research literature review has to be two-fold, on the one hand tackling the management concept, on the other hand, addressing the epistemology concept. The objective was to show how the latter may allow an easily provision to the former.

Research literature review:

- Management concept:

For those who are particularly specialists it may be given to say that management thought, all the way through its successively different phases, has wealthily been loaded with too many definitions of management. These definitions have actually come as a collective fitting to the varied streams included by every single phase.

Scientific school was focusing on developing basics and bases of scientific methods to work (Taylor, 1911, Locke, 1982, Wrege & Greenwood, 1991, and Wrege & Hodgetts, 2000), the administrative and functional school emphasized on the managerial functions and principles rather than work methods (Reid, 1995, and Wren, 2001). Bureaucracy was sufficiently focusing on the regulations and routine work (Mayer, 1943,

MacRae, 1974, and Jacoby, 2004). A human relation was much more interested with individual as human rather than machines (Barnard 1938, 1968, Graham, 1995, and Smith, 1998,). Behaviorists have taken management another step forward when considering the role of sociology, anthropology, and psychology in the complexity of managing people (George, 1972, Howell, 1995, and Dessler, 1999)..

Quantitative management theory was two fold concerned (Martinez, 2001). On the one hand operation management have positively highlighted the role to be done by models, simulations, games and other production measurement techniques that are applied to manufacturing or service industries (Santos, Powell, and Sarshar, 2002). On the other hand the information management that has lately become computer-based ones or E-MIS to provide managers with the information required for the decision making process (Marquardt, 1996). The systems theory has gone into two related streams, one that's interested in seeing organization as a whole system interacts with its environment through inputs and outputs and contains many integrated sub-systems (Wren & Bedeian, 1994 and Dettmer, 2003)), the other is interested in the cumulative energy of synergy that considers the whole as greater than the sum of its parts (Kast, and Rosenzweig, 1972). This theory helped managers to view the interrelationship within organizations while considering that the complexity of organizations may result in being overly cautious (Mockler, 1968).

In spite of the variables, flexibility and adaptation that are making up ingredients and considerations of the contingency management theory (Luthans, and Stewart, 1977), the latter was largely drawing upon the past to accommodate the present and predict the future as well (Wren, 2005 & Turengul, 2007). Contingency approach has turned the managers' attention to develop fallback positions and think creatively (Wren and Greenwood, 1998). The contribution of systems thinking theory could be shown in brief through focusing on the managers' views and decisions based upon perceptions versus truths and/or facts (O'Connor, 1999 & Checkland, 1999) and managers' positions as internal or from inside the system eye versus external or from outside the system eye (Checkland and Casar 1986), the core was the source and perspective of the view.

Quality management theory has passed through three main phases. First, the Kaizen approach that's considered quality pays for itself over time, accordingly small incremental steps of improvement may be required (Chandler, 1978). Second, the re-engineering approach that's based upon the assumption that change is a constant, it will always occur either gradually or radically (Wang, 1995 and Weathersby, 1999). Third, the TQM that is building on the fact that quality should not be but the task of

every one and every thing within the organization (Culp, Smith, & Abbot, 1994 and Mole, 2000).

Strategic management approach was concerned with making managers taking into consideration things like organization vision, philosophy, mission, strategy, policy, programs, tactic, and technique, wherever the level of planning as a total, business, or even functionally oriented (Klein & Debruine, 1995, Noda & Bower, 1996 and Andersen, 2000). It gives a greater importance to the organization-environment critically inseparable linkage, showing how environmental analysis has to be given the priority of whatever the sort of organization (Leavitt, 1989, De Kluyver, 2000 and Stiles, 2001).

Management by crises is the approach of management that concerned with either using or avoiding crisis for getting objectives attained (Mitroff & Pearson, 1993 and Racherla, & HU, 2009). The management of crisis was a different approach to show the difference to be taken into account by managers when striving to reach a balance point in facing crisis, and treating complexities versus reaching a resolution in dealing with problems (Lagadec, 1993 and Mitroff & Pearson, 1996). The governing factor herein will be the different characteristics of each sort of these problematic situations (Booth, 1993).

The MBP that show how managers could allow their subordinators to participate in developing the criteria and/or objectives so as to create a higher level of their commitment concerning the works leads to these objectives (Hatch, 1997). MBO has been built on clearly specifying and employing the objectives as the only criteria to use in evaluating the employee performance and the level of achievement (Greenwood, 1981). MBE was an approach of managing the controlling process that's depend upon the exceptional intervention of managers only in the case of the not allowed deviations so as to give much more priority for serious corrections urgently required and putting things on course rather than involving in the criteria that have already been met in a correct way (Duncan, 1989 and Mickelwait & Wooldridge, 1996). Teamwork management is the most suitable approach of management in situations, managerial levels, and organizations in which the nature of work and/or workers impose a high degree of cooperation rather than individuality (Drucker, 1946, John & Peter, 2002 and Mabey & Finch-lees, 2008).

The theory of chaos is dealing with managerial blocking up (Watson, 1995), it used to be employed when managers faced with long static or unacceptable circumstances in which they have no way but to create sort of chaos to see what positive consequences it may result in (Swanson & Oates, 1989 and Kiessling, & Richey, 2007). This chaos could be occurred as an organized one with certain references for relatively directing it, or

unorganized since it automatically occurs with no backing reference (Watson, Blackstone & Gardiner, 2007 and Wren, 2009).

However, there is a big difference between having had a definition to management that may reflect the view of just an author, stream of authors or even certain phase of management thought, and being aware of the management concept that's commonly known by the management efficient specialists as a summation of all the theories and schools of management, regardless of the difference that may be faced in formulation and/or wording.

It may be too hard even for the majors and specialists in the field of management to have a correctly aggregate concept of management except if they were proficiently given the opportunity to get into an extendedly sufficient awareness and absorption to all the written work and theories contained by the management thought. Even if this obstruction could be crossed over in the case of management specialists, one may be still curious about their capability to adopt and apply what has been theoretically considered by them. If the case was so for the managers who are originally management specialists. What about those managers who are practicing management without being originally specialist in such a field, logically it will be a hardily undertaken job.

How can we make these non-specialists management practitioners able to consider, adopt and apply a correct concept to management? To what extent could epistemology provide help in fulfilling such a task?

- Epistemology concept:

This research could be one of those having the potential to highlight the contribution of epistemology to management studies. This is so, because it makes a clear and strong argument in favor of placing practically epistemology in so far as methodology at the centre of management research. Far too often, in this area, epistemological concerns have been neglected in favor of methodological ones.

The interest of **methodology** has always been focused on logically tackling by use of research the path that may be taken by knowledge (Easterby-Smith, 1991). It focuses on the **organization of knowledge** (Smith, 1975). For instance methodology used to show how phenomena are indicating problems (Hakim, 198), how hypotheses lead to reasons and/or initiate resolutions (Hussey and Hussey 1997), how introductions lead to consequences (Adams & Srivaneveldt, 1991), how causes result in effects (Kirk, 1982 and Remeny *et al*, 1998), how new variables are experimentally occurring result/change (Cook & Campbell, 1979), how could the first phase through a narrative way show the final one (Sekaran,

1983), how could the real failure create the normative theory (Katz, 1966 and Kerlinger, 1986), how similarities could analytically show differences (Kaplan, 1979), how core points may be gotten by grounded theory (Glaser and Strauss, 1967) and so on.

Unlike what is mentioned above epistemology is concerned with the philosophy of knowledge (Dancy, 1991). This could be collectively shown through the three aspects of its area of interest. **Firstly**, in terms of the knowledge sourcing it investigates the issue of **how we know what we know** (Tomberlin, 1999), and herein too many streams are involved in differentiating amongst impressions (Greco and Sosa, 1999), perceptions, truths, facts, and mentalities those include thinking, analysis, interpretation, storming, connections and others (Lewis, 1996). **Secondly**, regarding the knowledge tackling it investigates the issue of **how could we criticize what we know** (BonJour, 2002), accordingly there were too many frameworks of knowledge criticism, those classically established in literature to express directions such as realism, functionalism, positivism, subjectivism, rationalism, empiricism, constructivism, coherentism, and additionally the successive pragmatic and/or modern frameworks of criticizing knowledge (Steup, M. (2005). **Thirdly**, with respect to producing, introducing and/or providing knowledge to others, it investigates the issue of people **knowledge adequacy/inadequacy** (Boufoyo, 2005), it points out that when people get insufficient knowledge concerning some field, as being neither majors nor specialists, their inadequate knowledge concerning this certain field is considered as fake or false. Accordingly the part correctly knows? How could the independent fields of knowledge allowed to people - as segmented whole of different specialists - collectively allowed to all people regardless of the varied fields of specialization (Hay, 2008)? How the whole body of knowledge could be correctly allowed to all people? How could the whole body of knowledge deployed for simply providing certain field of knowledge (Bovens and Hartmann, 2003)?

Despite of the difficulty and impracticality to have such an objective generally achieved, epistemology can have a justifiable role in this direction in some particular fields of knowledge such as management. Since management is practiced by all managers regardless of their background or even area of specialization. It is nearly like salt in food.

To sum up the focus of this research is to show how to utilize epistemology for simply facilitating the practical consideration of the management concept, specifically for the managers who are practicing management without being originally specialist in this field. How could the

whole body of knowledge deployed for providing the concept of management to these managers?

The justification to this could be highlighted by recognizing that the lack of knowledge about such a concept by this sort of managers is most probably resulting in their adoption to a fake or false one. They will have no way but to stick with their own espoused concepts rather than the right or academic concept that should be in use.

The subject of using epistemology for practically facilitating the consideration of the right management concept by those managers or practitioners who are originally non-specialist in management is meeting a gap to fill up in management literature, as a consequence this theoretically justifying the conduction of this research.

Research Problem:

Table (1) Results of exploratory study

Axes and variables	Measure cells and weights					Horizontal weighted average	Horizontal vertical weighted average
	Definitely agree	Agree	agree & disagree	disagree	Absolutely disagree		
	1	2	3	4	5		
Section I							
Both actual & expected roles are congruent.							
Concerning the emergency role	2	3	1	20	24	4.22	4.24
Concerning the treatment role	4	1	2	19	24	4.16	
Concerning the health-maintenance role	1	2	1	24	22	4.28	
Concerning the health-serving role	2	3	2	18	25	4.22	
Concerning the educational role	3	3	1	20	23	4.14	
Concerning the research role	2	1	1	20	26	4.34	
Concerning the self-development role	3	2	2	22	21	4.12	
Concerning the field Integrative role	1	1	3	18	27	4.38	
Concerning the self-development role	2	1	2	20	25	4.30	
Concerning the social responsibility	1	3	3	21	22	4.20	

Section 2							4.22
Hospitals capability to play their role as it is expected, is unconditionally based upon their adoption to the right management concept:							
Concerning the emergency role	4	3	1	20	22	4.06	
Concerning the treatment role	2	3	3	20	22	4.14	
Concerning the health-maintenance role	1	2	2	22	23	4.28	
Concerning the health-serving role	3	3	2	21	21	4.08	
Concerning the educational role	2	2	1	20	25	4.28	
Concerning the research role	1	1	1	21	26	4.40	
Concerning the self-development role	3	1	1	24	21	4.18	
Concerning the field Integrative role	1	1	2	21	25	4.36	
Concerning the self-development role	2	1	2	20	25	4.30	
Concerning the social responsibility role	3	3	2	20	22	4.10	

Source: Established based upon the primary data collected by exploratory study

For really justifying the research problem, an exploratory study has to be conducted based upon structured interviews. The interviews main question that has been directed to a targeted group of (50) interviewees was; to what extent you consider that the organization you are working in is actually performing its role as it is expected by it?

As shown in detail in section (1) by Table (1) at minimum (43) individuals or (86%) of interviewees have gone with initial consideration of research problem, while at maximum (7) individuals or (14%) of interviewees were distributed between the other cells of scale to indicate oppositely the anti-initial consideration of problem.

At the same table, the results mentioned above have been supported by using horizontal weighted average of responses, concerning every single sub-variable partially expressing one aspect of the research problem; it was at minimum (4.12). The vertical weighted average of all the included sub-variables was considered as well, it was (4.24). Both of them were exceeding (3) as the ranking value of the middle cell of the employed scale with a difference equal to (1.12) and (1.24) respectively.

In another complementary question that was "To what extent do you consider that the capability of the governmental hospitals to play the different roles as expected by them is not conditionally based upon their adoption to the right management concept?"

The interviewee answers were as shown in section (2) by Table (1). The lowest number of interviewees who agree with a conditional

relationship was (42) individuals or (84%) while the highest number of interviewees who disagree with the conditional relationship plus those who have taken neutral response was (8) individuals or (16%). This orientation has been verified by the lowest limit of the horizontal weighted average value that was (4.06) and also the vertical value of weighted average that was (4.22).

However, this problem could be statement-expressed in the say that "there is a lack of congruency between the role actually done and the role to be done by the governmental hospitals". The questions gradually come up by this problem are; does the incongruence of roles return back to the non-adoption of the right management concept? If so does this could be returned back to the insufficient motivation to adopt such a right concept? If so does the lack of motivation to adopt the right concept return back to the inability to consider this concept? If so could epistemology facilitate a simple presentation to this concept particularly to those non-specialist management practitioners?

It should be pointed out that during interviews there was a sufficient room for quarry and comment concerning all the variables included by Table (1). This was not only for considering the research problem but also for the purpose of building research questions, hypotheses and model later on.

Research objectives:

- Evaluating the actual role of Egyptian hospitals compared with the expected role that should be done by them.
- Evaluating to what extent the top managers of these hospitals are adopting an academically correct management concept.
- Establishing a theo-hypothetical model that's based upon a two-side conceptual framework, for empirically examining the relationship between the adoption/non-adoption of governmental hospital top manager's to the right management concept and the success/failure of these hospitals to play their role as expected by them.
- Showing analytically how epistemology as the field that's interested in the philosophy of knowledge could be used to facilitate the presentation of the right management concept to be easily adopted by governmental hospitals' top managers as originally non-specialist practitioners of management.

Research hypotheses:

- There is no statistically indicative significant relationship between; on the one hand, the lack of congruency between the role actually done and the role to be done by the governmental hospitals, and on the other hand, the lack of their top managers' motivation and/or interest to adopt an academically-based rather than self-based concept of management in these hospitals.
- There is no statistically indicative significant relationship between; on the one hand, the lack of top-managers motivation and/or interest to adopt an academically-based rather than self-based concept of management in governmental hospital, and on the other hand their need for more epistemologically simplified concept rather than specifically specialized one.

The latter independent variable could be branched into (16) sub-variables as follows:

- Their need for epistemologically considering "trying versus repeating". (Hypothesis 2/1).
- Their need for epistemologically considering "exploiting versus using resources". (Hypothesis 2/2).
- Their need for epistemologically considering "efficiency versus optimality". (Hypothesis 2/3).
- Their need for epistemologically considering "feasible versus available resources". (Hypothesis 2/4).
- Their need for epistemologically considering "organizational vs. individual work". (Hypothesis 2/5)
- Their need for epistemologically considering "work through versus by others". (Hypothesis 2/6)
- Their need for epistemologically considering "practice versus experience". (Hypothesis 2/7)
- Their need for epistemologically considering "behavioral versus technical functions". (Hypothesis 2/8)
- Their need for epistemologically considering "original versus derivative activities". (Hypothesis 2/9)
- Their need for epistemologically considering "ordering versus priority". (Hypothesis 2/10)
- Their need for epistemologically considering "so as to versus to reach objectives". (Hypothesis 2/11)
- Their need for epistemologically considering "effectiveness versus success criteria ". (Hypothesis 2/12)
- Their need for epistemologically considering "means versus purposes and/or ends". (Hypothesis 2/13)

- Their need for epistemologically considering "changeable versus changing environment". (Hypothesis 2/14)
- Their need for epistemologically considering "first versus last condition of management". (Hypothesis 2/15)
- Their need for epistemologically considering "last versus first condition of management". (Hypothesis 2/16)

Research Methodology:

- Research population and sample:

The field of this research is empirically represented in governmental hospitals; those are formally followed to the ministry of health. The research population was specifically identified in the top managers of these governmental hospitals. Accordingly the size of population was (539) hospital top manager exactly the same as the real number of this kind of hospitals.

Due to the availability of a list of population members' accessible names, positions, telephone numbers, and e-mail addresses it was easy to depend on population for choosing a probability sample. Despite of the research population homogeneity in terms of the measurement objective it is geographically heterogeneous because of the distribution of its members or units on hospitals located in seven regions of the country and a different number of cities included in each region. That's why it was preferable to rely on a stratified random sample to consider the balance effect of geographical factor as much as the similarity factor on the sampling process. The classic way of writing the data of population members in a small piece of paper was the one based upon in withdrawing the sample units, in other words it was the sampling process technique.

The sample size has totally specified as (214) sampling unit. It was calculated according to the two equations of $(n = z^2 * p * q / d^2)$ and then $n_0 = n / (1 + n/N)$ to be $[n = (1.96)^2 * 0.80 * 0.20 / (0.04)^2 = (354.3876)]$, and so the $n_0 = 354.3876 / 1 + (354.3876 / 539) = 213.80968$, approx. = (214) sampling units].

The sampling unit – which is originally the population unit – was characterized in the doctors who are individually occupying the top or highest position as managers to the whole entity of governmental hospital.

- Questionnaire design and data collection:

In terms of the instrument of data collection, the exploratory study was essentially based upon the structured interviews, while the main field study is conducted only by the use of questionnaire. The questionnaire design has

been subjected to the most fitting conditions. Variables to measure were actually expressed in a form of a mix of short and extended statements that are entitled as groups or axes to be easily considered. However, it was taken into account that words have to be generally understandable, technically simple, precisely indicative, and out of double meaning.

The governing factor in ordering the questionnaire was the commonsense of research subject that was reflected by the logic sequence of the hypotheses and also the included variables and sub-variables. There was a sufficient room for questions and answers, as well as margins that made the data collection instrument looks more attractive and comfortable.

Alphabetical letters and serial numbers have sequentially been applied in conjunction for coding the questions, variables and sub-variable included in questionnaire according to the very common way of ordering. This coding is actually committed with, in making the computer data-entry and analysis.

With a little bit changing in wording to fit the aspects which are subject to measurement it could be said that the scale depended on was Liker-type scale. However it may be more precise to say it was Likert-based scale rather than Likert scale.

- Questionnaire validity and reliability.

Due to the main dependency on questionnaire as a primary data collection instruments in conducting the empirical study of this research, the questionnaire validity and reliability were sufficiently given a particular importance. The interviewees - as members of research population - who have been investigated in the exploratory study were to be used quantitatively and qualitatively again in establishing the questionnaire validity and reliability.

Verifying the validity about five group-interviews have been held, each one was for about two hours and half with a number of ten doctors working as top managers of governmental hospitals in every single one of the group-interviews. This results in; first ensuring face validity through excluding word and form deficiency and irrelevancy, second verifying the content validity as well through getting confirmed that item and non-item aspects are most suitable in terms of quantity and quality to measure the concepts for which they were existed in the measure.

In addition to this, another six individual interviews have been held with academic staff. Three professors were specialist in management and three professors were specialist in medicine to examine the same two objectives of face and content validity of questionnaire. As a consequence many rather than few extractions and adjustments in different portions of the questionnaire concerning wording, formulation, ordering, logic,

sequence, and layout have been occurred to give a large room of consensus and a prime indication of consistency.

Establishing the reliability the valid questionnaire has separately been distributing on the targeted (50) governmental hospital top managers. The objective was to verify the accuracy of the measure, which has been proved in this research case by the homogeneity amongst the responses concerning the measure's included items, or in other words the inter-item correlation.

Item-subgroup and item-group correlations have been statistically testified to show a lowest limit of correlation coefficient equal to (0.9006) and (0.9113) in order. It indicated a very high level of measure consistency. Moreover, it has depended on these high levels of inter-item correlation to calculate C. alpha to show minimum values in the two cases equal to (0.9706) and (0.9926) respectively. Other details could be shown in Table (2).

It has come out that the highest values of alpha if item excluded from the sub-groups number (C1),(C2), (C3), (C4), (C5), (C6), (C7), (C8), (C9), (C10), (C11), (C12), (C13), (C15), and (C16) were (0.9843), (0.9903), (0.9871), (0.9845), (0.9838), (0.9847), (0.9928), (0.9881), (0.9711), (0.9867), (0.9843), (0.9882), (0.9851), (0.9934), (0.9903) and (0.9625) in order. Those were lower than the parallel values of alpha if all items included in the same sub-groups which respectively were (0.9856), (0.9921), (0.9887), (0.9884), (0.9858), (0.9886), (0.9933), (0.9906), (0.9737), (0.9885), (0.9856), (0.9901), (0.9873), (0.9930), (0.9917), and (0.9706) in each case of comparison. It has been found as well that the maximum values of alpha if item deleted from the groups number (A),(B), and (C), were (0.9922), (0.9929), and (0.9982), in order. Those were lower than the values of alpha if all items have not been deleted from the same groups, which were (0.9926), (0.9937), and (0.9989) respectively.

A comparison in each case could be obviously shown by the Table (2). This indicated that there is no need for item-excluding and the whole research questionnaire is properly valid and reliable as an instrument for primary data collection.

Table (2) : Reliability and validity

No	Var.	No	Sub-var.	Item sub-group correlation	C. Alpha if item excluded from sub-group	C. Alpha if all items included in sub-group	Item group correlation	C. Alpha if item excluded from group	C. Alpha if all items included in group
A	Congruency between the role done and the role to be done	a1	The emergency role	There is no	There is no	There is no	0.9626	0.9909	0.9926
		a2	The treatment role				0.9770	0.9904	
		a3	The health-maintenance role				0.9688	0.9908	
		a4	The health-serving role				0.9600	0.9909	
		a5	The educational role				0.9741	0.9906	
		a6	The research role				0.9113	0.9922	
		a7	The self-development role				0.9690	0.9908	
		a8	The cooperative/integrative role				0.9799	0.9905	
		a9	The self-development role				0.9528	0.9913	
		a10	The social responsibility role				0.9543	0.9911	
B	Adopting an academically correct concept to management.	b1	Concerning the Philosophy	There is no	There is no	There is no	0.9738	0.9916	0.9937
		b2	Concerning the vision				0.9657	0.9918	
		b3	Concerning the mission				0.9721	0.9916	
		b4	Concerning the strategy				0.9637	0.9919	
		b5	Concerning the policies				0.9807	0.9914	
		b6	Concerning the programs				0.9435	0.9924	
		b7	Concerning the tactics				0.9829	0.9913	
		b8	Concerning the techniques				0.9704	0.9924	
		b9	Concerning the functions.				0.9722	0.9919	
		b10	Concerning the decisions				0.9426	0.9928	
C	Trying versus repeating	c1.1	When trying the manager may get right.	0.9427	0.9798	0.9856	0.9629	0.9942	0.9989
		c1.2	When trying the manager may get wrong.	0.9735	0.9749		0.9793	0.9922	
		c1.3	when trying the manager may get right plus wrong.	0.9682	0.9757		0.9738	0.9932	
		c1.4	Trying is not applying a pure science nor an art.	0.9699	0.9772		0.9839	0.9912	
		c1.5	Trying is Indicating management as a theory.	0.9309	0.9843		0.9381	0.9953	
	Exploiting versus using resources	c2.1	Management oriented with two sorts of resources.	0.9727	0.9886	0.9921	0.9719	0.9932	
		c2.2	It should directly deal with the human resources.	0.9832	0.9873		0.9804	0.9912	
		c2.3	Managing human resources is due to nonhuman.	0.9882	0.9863		0.9856	0.9912	
		c2.4	Using resources means you are conditionally free.	0.9589	0.9903		0.9789	0.9922	
		c2.5	Exploiting resources indicates certain conditions.	0.9758	0.9900		0.9799	0.9922	
	Efficiency versus optimality	c3.1	Employing resources should be as required.	0.9736	0.9821	0.9887	0.9806	0.9912	
		c3.2	The urgently required identified by the needs.	0.9813	0.9797		0.9828	0.9912	
		c3.3	what is urgently needed has to be mapped.	0.9827	0.9790		0.9760	0.9922	
		c3.4	meeting urgent needs is allowing efficiency.	0.9507	0.9844		0.9222	0.9972	
		c3.5	Efficiency is measurable while optimality is not.	0.9416	0.9871		0.9749	0.9922	
	Feasible versus available	c4.1	Available resources are not the only important.	0.9736	0.9808	0.9834	0.9787	0.9922	
		c4.2	Transferable resources are important as well.	0.9577	0.9839		0.9708	0.9932	
		c4.3	Future resources have to be taken into account.	0.9676	0.9814		0.9791	0.9922	
		c4.4	Feasibility is considered from the project phase.	0.9719	0.9805		0.9796	0.9922	
		c4.5	Decisions are projects to subject to feasibility study.	0.9546	0.9845		0.9609	0.9932	
	Organizational work vs. individual work	c5.1	Works are two sorts the individual and the group.	0.9317	0.9839	0.9856	0.9544	0.9942	
		c5.2	Individual work is out of management interest.	0.9767	0.9772		0.9857	0.9912	
		c5.3	Group work subject to management interest.	0.9739	0.9789		0.9804	0.9912	
		c5.4	Cooperation is the core task of management.	0.9483	0.9814		0.9651	0.9942	
		c5.5	The more the cooperation the more the stability.	0.9572	0.9814		0.9672	0.9932	
work through others	c6.1	Management is Interactive communication process	0.9638	0.9817	0.9888	0.9814	0.9912		
	c6.2	Manager and his subordinator are important.	0.9776	0.9810		0.9754	0.9922		
	c6.3	Subordinator Importance comes from delegation.	0.9745	0.9801		0.9709	0.9932		
	c6.4	Subordinator has to work in a different way	0.9643	0.9842		0.9791	0.9922		
	c6.5	Subordinators should not be seen as machines.	0.9457	0.9847		0.9529	0.9942		
Practice versus experience	c7.1	Practicing is a pre-requisite for efficiency.	0.9687	0.9926	0.9933	0.9614	0.9932		
	c7.2	Practicing is a function in interactive factors.	0.9690	0.9901		0.9831	0.9912		
	c7.3	Experience is only one condition of practicing.	0.9918	0.9872		0.9822	0.9912		
	c7.4	Time and place are conditions of practicing.	0.9874	0.9881		0.9731	0.9932		
	c7.5	Position and specialization are conditions as well.	0.9816	0.9883		0.9827	0.9912		

F. Table (2) Reliability and validity

No	Var.	No	Sub-var.	Item sub-group correlation	C. Alpha if item excluded from sub-group	C. Alpha if all items included in sub-group	Item group correlation	C. Alpha if item excluded from group	C. Alpha if all items included in group
0	Behavioral versus technical	c8.1	Management functions are technical & behavioral	0.9816	0.9881	0.9806	0.9721	0.9932	0.9888
		c8.2	Functions are technically identified as four ones.	0.9735	0.9866		0.9801	0.9912	
		c8.3	Management is directing behaviors to objectives.	0.9806	0.9870		0.9762	0.9922	
		c8.4	Behaviors of people are definitely endless.	0.9735	0.9866		0.9704	0.9932	
		c8.5	Management behavioral functions are endless.	0.9688	0.9870		0.9860	0.9912	
	Original versus diversified activities	c9.1	Marketing and production are prerequisite.	0.9441	0.9615	0.9737	0.9635	0.9942	
		c9.2	Finance, HR, and supply are also main activities.	0.9497	0.9617		0.9614	0.9942	
		c9.3	Some organizations activities may look different.	0.9452	0.9613		0.9774	0.9922	
		c9.4	Varied activities have to be looked at as original.	0.9446	0.9613		0.9386	0.9962	
		c9.5	Considering varied as derivative leads to failure	0.9287	0.9711		0.9486	0.9952	
	Importance versus in order priority	c10.1	In need production & marketing come first.	0.9558	0.9867	0.9885	0.9635	0.9942	
		c10.2	In executing other activities ranked before.	0.9582	0.9860		0.9752	0.9932	
		c10.3	Marketing comes before in competitive markets.	0.9708	0.9843		0.9785	0.9922	
		c10.4	Production comes before in virgin markets.	0.9709	0.9841		0.9795	0.9922	
		c10.5	All activities are equally important.	0.9698	0.9843		0.9811	0.9912	
	So as to versus to get objectives	c11.1	Conditions are allowed in objectives to attain.	0.9031	0.9833	0.9856	0.9519	0.9942	
		c11.2	Conditions are allowed for objectives to attain.	0.9752	0.9743		0.9709	0.9932	
		c11.3	Getting objectives attained is effort conditional.	0.9702	0.9762		0.9521	0.9942	
		c11.4	Objectives attainment is resources conditional.	0.9551	0.9776		0.9501	0.9942	
		c11.5	There is normally an allowed room for deviation.	0.9736	0.9745		0.9788	0.9942	
	Effectiveness versus other criteria	c12.1	Effectiveness is the law to judge on success.	0.9685	0.9882	0.9901	0.9744	0.9932	
		c12.2	Effectiveness is the measurable criteria to use.	0.9826	0.9845		0.9817	0.9912	
		c12.3	Effectiveness should be based upon objectives.	0.9698	0.9888		0.9718	0.9932	
		c12.4	Effectiveness should consider a deviating room.	0.9686	0.9873		0.9845	0.9912	
		c12.5	Other success criteria are just supportive ones.	0.9712	0.9861		0.9713	0.9922	
	Means versus purposes/ ends	c13.1	Tangible objectives are measurable and vice versa.	0.9582	0.9806	0.9873	0.9634	0.9932	
		c13.2	Tangible objectives allow more means to fulfill.	0.9771	0.9766		0.9795	0.9932	
		c13.3	Tangible objectives are means for intangible ones.	0.9345	0.9851		0.9419	0.9952	
		c13.4	Working on means is not a guarantee to get end.	0.9563	0.9816		0.9776	0.9922	
		c13.5	Objectives are particular while ends are universal.	0.9841	0.9753		0.9863	0.9912	
	Changeable versus changing	c14.1	Internal and external environment change.	0.9814	0.9882	0.9930	0.9874	0.9912	
		c14.2	Internal one is changeable rather than changing.	0.9617	0.9934		0.9665	0.9942	
c14.3		Direct external one is changeable and changing.	0.9848	0.9881	0.9813		0.9912		
c14.4		Indir. external is changing rather than changeable.	0.9813	0.9881	0.9869		0.9912		
c14.5		change based on management existence/absence.	0.9810	0.9883	0.9769		0.9932		
First versus last condition	c15.1	Trying is a condition to exploit resources.	0.9800	0.9877	0.9917	0.9762	0.9932		
	c15.2	Resources is a condition for practicing functions	0.9631	0.9803		0.9608	0.9942		
	c15.3	Functions are conditions to fulfill activities.	0.9753	0.9889		0.9806	0.9912		
	c15.4	Activities are conditions to get objectives.	0.9738	0.9888		0.9828	0.9912		
	c15.5	Objectives are conditions to hit environment.	0.9805	0.9877		0.9760	0.9932		
Last versus first condition	c16.1	Environment is a reason to accept objectives	0.9076	0.9825	0.9706	0.9222	0.9972		
	c16.2	Objectives are reasons for legalizing activities	0.9325	0.9448		0.9749	0.9932		
	c16.3	Activities are reasons of management functions.	0.9567	0.9404		0.9825	0.9912		
	c16.4	Functions are reasons to exploit resources.	0.9276	0.9558		0.9167	0.9882		
	c16.5	Exploiting resources is a reason for trying	0.9131	0.9596		0.9177	0.9932		

Source: Based upon real data

Establishing the reliability the valid questionnaire has separately been distributing on the targeted (50) governmental hospital top managers. The objective was to verify the accuracy of the measure, which has been proved in this research case by the homogeneity amongst the responses concerning the measure's included items, or in other words the inter-item correlation.

Item-subgroup and item-group correlations have been statistically testified to show a lowest limit of correlation coefficient equal to (0.9006) and (0.9113) in order. It indicated a very high level of measure consistency. Moreover, it has depended on these high levels of inter-item correlation to calculate C. alpha to show minimum values in the two cases equal to (0.9706) and (0.9926) respectively. Other details could be shown in Table (2).

It has come out that the highest values of alpha if item excluded from the sub-groups number (C1),(C2), (C3), (C4), (C5), (C6), (C7), (C8), (C9), (C10), (C11), (C12), (C13), (C15), and (C16) were (0.9843), (0.9903), (0.9871), (0.9845), (0.9838), (0.9847), (0.9928), (0.9881), (0.9711), (0.9867), (0.9843), (0.9882), (0.9851), (0.9934), (0.9903) and (0.9625) in order. Those were lower than the parallel values of alpha if all items included in the same sub-groups which respectively were (0.9856), (0.9921), (0.9887), (0.9884), (0.9858), (0.9886), (0.9933), (0.9906), (0.9737), (0.9885), (0.9856), (0.9901), (0.9873), (0.9930), (0.9917), and (0.9706) in each case of comparison. It has been found as well that the maximum values of alpha if item deleted from the groups number (A),(B), and (C), were (0.9922), (0.9929), and (0.9982), in order. Those were lower than the values of alpha if all items have not been deleted from the same groups, which were (0.9926), (0.9937), and (0.9989) respectively.

A comparison in each case could be obviously shown by the Table (2). This indicated that there is no need for item-excluding and the whole research questionnaire is properly valid and reliable as an instrument for primary data collection.

- Questionnaire administering process.

A mix of three ways that contained all together the personal, electronic, and postal administration of questionnaire has been used. This was occurred in accordance with the ease of using each. The same way used as well in collecting back the questionnaires. Distribution of questionnaire was essentially fitting to the number of representatives of every single stratum and sub-stratum in the sample that's originally based upon the disproportionate number of individuals in the sections and sub-sections - regions and cities - included in the whole research population. This could be shown in detail by the Table (3).

The process that questionnaire was administered has been carried out in more than two months or roughly seventy days - including non-working days - 20 days for questionnaires distribution, 20 days for being left with

the respondents, 20 days for collecting back the distributed questionnaires and additionally 10 days for the delay after the deadline time. This time allocation was initially considered in advance so as to allow a highest level of responding, although the time required by the respondents to deal with the questionnaire, according to their views, was actually ranged between (60 and 80) minuet.

It should be noted as well that every single sampling unit or respondent has been given two copies of questionnaire one was in Arabic language while the other was in English language. Deeming the easier to every one, respondents have been allowed a free room to answer optionally either the questionnaire copy in Arabic or in English.

Table (3) Distributed, responded and right questionnaire

R & GO		NO IN P	NO IN S	D. QUEST.		RE. QUEST		C. QUEST	
				G	R	G	R	G	R
Cairo region	Cairo	51	20.3	21	49	20	48	20	47
	Elgiza	21	8.3	8		8			
	Elqalubia	23	9.1	9		9			
	Helwan	13	5.1	5		5			
	October	14	5.6	6		6			
Alex. region	Alex	28	11.1	11	27	10	25	10	25
	Matrouh	14	5.6	6		6			
	El-behara	24	9.5	10		9			
Delta region	Elmenofia	22	8.7	9	51	9	50	9	45
	Elgharbia	26	10.3	11		11			
	K.elseekh	23	9.1	9		9			
	Dekahlia	33	13.1	14		13			
	Demiat	20	7.9	8		8			
Canal region	S. Sinai	8	3.2	3	30	3	30	3	30
	N. Sinai	8	3.2	3		3			
	P. said	12	4.8	5		5			
	Elswees	6	2.4	3		3			
	Ismailia	10	3.9	4		4			
	Elsharqia	29	11.5	12		12			
Upper Egypt north	B. Sweef	12	4.8	5	14	2	5	2	5
	Elfayoom	11	4.4	4		1			
	Elmenia	13	5.2	5		2			
Upper Egypt south	Sohag	22	8.7	9	31	9	28	9	28
	Qena	14	5.6	6		6			
	Aswan	16	6.4	7		7			
	Alaqsor	14	5.6	6		3			
	Red sca	7	2.8	3		3			
Asut region	Asut	21	8.3	8	12	3	4	3	4
	Elwady lg.	6	2.4	4		1			
Total		539		214	214	190	190	185	185

R: region, Go: governorates, P: population, S: Sample, D: distributed,
Re: responded, C: correct, Quest: Questionnaire

Source; Based upon real data

- Testing sample representation.

It should be noted that sample representation to the research population has been considered at three levels.

First when identifying the population individuals to be represented in the stratified random sample - of total size (214) sampling units, it has been depended on the very traditional way of using small peaces of paper to put data of population individuals in, and then randomly picking up - with no replacement - the required number of individuals for each sub-stratum of the sample. The reason behind this was the small number of individuals that's originally included in every single category of population.

Second, when collecting the questionnaires, it has been found that the number of respondents was (190) sampling units. That's why it was required to testify whether the sample according to the new number still keeping the representation of population as a whole and at the level of every single one of its categories and sub-categories or not.

Kolmogrov-Smirnov test that based on a comparison of the cumulative proportion of the observed values in each category with the cumulative proportion in the same category for the specified population is used. The reason was testing whether the distribution of the observed data (number and category of respondents) differs significantly from specified population or not.

Table (4) how the sample keep the representation of research population

Source: based upon the number of distributed, collected, and correct questionnaires

GO&R		Com1		Com 2		Com3		COM1 - COM2		COM1- COM3	
		Go	R	Go	R	Go	R	DI	D2		
Cairo Elgiza Elqalubia Helwan 6 October	Cairo Region	0.09813		0.10526		0.10811		0.0		0.0	
		0.03738	0.2289	0.04210	0.2526	0.04324	0.2541	0.0	0.0	0.0	0.0
		0.04206		0.04737		0.04865		0.0	0.0	0.0	0.0
		0.02336		0.02632		0.02703		0.0	0.0	0.0	0.0
		0.02804		0.03158		0.03243		0.0	0.0	0.0	0.0
Alex Matrouh El-behara	Alex region	0.05140	0.1262	0.05263	0.1315	0.05405	0.2432	0.0	0.0	0.0	0.0
		0.02804		0.03158		0.03243		0.0	0.0	0.0	0.0
		0.04673		0.04737		0.04865		0.0	0.0	0.0	0.0
Elmenoffia Elgharbia K.elseekh Dekahlia Demyat	Delta region	0.04206		0.04737		0.05405		0.0		0.0	
		0.05140	0.2383	0.05789	0.2632	0.05946	0.2432	0.0	0.0	0.19	0.0
		0.04206		0.04737		0.05405		0.0	0.0	0.0	0.0
		0.06542		0.06842		0.04324		0.0	0.0	0.022	0.0
		0.03738		0.04210		0.04324		0.0	0.0	0.0	0.0
S. Sinai N. Sinai P. said Elswees Ismailia Elsharqia	Canal region	0.01402		0.01579		0.01621		0.0		0.0	
		0.01402	0.1402	0.01579	0.1579	0.01621	0.1622	0.0	0.0	0.0	0.0
		0.02336		0.02632		0.02703		0.0	0.0	0.0	0.0
		0.01402		0.01579		0.01621		0.0	0.0	0.0	0.0
		0.01869		0.02105		0.02162		0.0	0.0	0.0	0.0
		0.05607		0.06316		0.06486		0.0	0.0	0.0	0.0
B. Sweef Elfayoom Elmenia	Upper Eg. north	0.02336	0.0654	0.01053	0.0263	0.01081	0.02703	0.013	0.04	0.013	0.04
		0.01869		0.00526		0.00541		0.013		0.013	
		0.02336		0.01053		0.01081		0.013		0.013	
Sohag Qena Aswan Alaqsor Red sea	Upper Eg. south	0.04206		0.04737		0.05405		0.0		0.0	
		0.02804	0.1449	0.03158	0.1474	0.03243	0.15135	0.0	0.0	0.0	0.0
		0.03271		0.03684		0.03783		0.0	0.0	0.0	0.0
		0.02804		0.01579		0.01621		0.012	0.0	0.012	0.0
		0.01402		0.01579		0.01621		0.0	0.0	0.0	0.0
Asut Elwady	Asut region	0.03738	0.0561	0.01579	0.0211	0.01621	0.0216	0.022	0.04	0.021	0.03
		0.01869		0.00526		0.00541		0.013		0.013	

Com1= Distributed No. of questionnaires in governorate or region/ total No. of distributed questionnaires
Com2= Responded No. of questionnaires in governorate or region/ total No. of responded questionnaires
Com3= Correct No. of questionnaires in governorate or region/ total No. of correct questionnaires

As shown in Table (4) the biggest cumulative difference in the case of the calculated (D1) and (D2) at the levels of both sub-stratum and stratum in order was (0.022) and (0.04), and each one was lower than the tabulated (D) values, those were (0.099) and (0.12) at levels of significance equal to (0.05) and (0.01) respectively. This has taken place for a sample size of both (190) and (185), which are represented by the number of collected and then correct questionnaires. This revealed that there is no significant difference, or the sample still representing the population.

- Research limits

The subject academically addressed by this research could be contained within four axes how **epistemology** could help in simplifying the **management concept**, to make it more practically considered by the management **non-specialist** practitioners, so as to be able to play the **role expected** by their organizations, thus any branched subjects out of this area were considered as research irrelevant.

The field study has only been focused on the Egyptian governmental hospitals; those belonged to the ministry of health, so any other kind of hospitals is research irrelevant. Choosing the governmental hospitals in particular could be justified as follows:

- They are top-managed by doctors who are not management specialist, this logically fitting the research subject.
- They are providing free services for the lowest and wide class of Egyptian society that's have the minimum share of income. This is giving more importance to this research.
- They are financially afforded by Egyptian government budget, so it is representing unavoidable burden on the economy of Egypt as a third world country.
- They are the most commonly known as providers of low quality health services, so their performance and consequently their role are negatively questionable by the society people.

The population of research was only represented in the doctors working as heads of these hospitals, so any lower managerial levels were research irrelevant.

Research framework and model:

The one who is looking forward to know about a new field of knowledge, for first time, used to return to specialized references, those are tackling the basics of that field. Usually, in the primary phase the importance will be logically directed by getting the concept of the discipline or area of interest. If the targeted field of knowledge belongs to pure sciences that based upon facts and fixed basics and bases like chemistry and physics it will be easy for the normal one to get the same

concept of the area. That's previously gotten by the specialist and/ or majors in the field. Practicing any work based upon this knowledge will not deviate from the common basics of the area.

However, this is not the case when the target field of knowledge belongs to humanitarian and/or social sciences. It is hardly for bingers as well as non-specialist ones to get a commonly known concept concerning the certain humanitarian field. This occurs not only because it takes time but also because concepts in such fields of knowledge are to large extent argumentative. Fortunately, most of the people who are interested in the latter kind of humanitarian sciences used to be specialists if they have to go into applying these areas of knowledge or practicing professions based upon them. But if they do not have to be practitioners it will not be that risky to be freely aware of these knowledge areas.

In management, as one of social sciences, we are facing a very exceptional case. While not all the people specialist in management all of them in some point of their career path have to be managers. This could be easily clarified when considering that most of people working in private and public sectors whatever the jobs occupied by them have to be managers for period of time that may exceeds the half of their work life-time. Accordingly we are faced in most of the workplaces - in deferent kinds of organizations - with people who are practicing management or in other words working as top managers while they may have no managerial background, have a little bit knowledge of the area, have non-academic or just free knowledge of the area, have to be oriented and committed with their original different field of specialization in practicing management, or who are not convinced by management as specialist field of knowledge, who tend to argue and resist concerning the academic basics and bases in this area, and so on. The failure of these managers, whatever the reason, to be oriented by a correct management concept is actually one of the hypothetical reasons beyond their organizations failure to play the role expected by them. Even if they are completely satisfied concerning the actual role done by these organizations, still there is a question; does this role could be improved if the adopted concept of management is the academically correct one.

Tackling such an issue, as shown by Figure (1), the challenge to face is we are actually in the front of two points of views concerning the concept of management. One is specifically considering this concept within the context of specialized discipline or in other words according to an academic knowledge and/or background as reflected by specialists and majors in the field of management. The other is variously recognizing such a concept within the context of diversified disciplines or in terms of separately different disciplines as reflected by management non-specialist

practitioners. It is not that hidden to say that on the one hand, the first stream of management specialists used to claim that management non-specialist practitioners are satisfied with what they do and get and this is motivating them to be wrongly more involved with the work on the account of being more managerially qualified to improve it. They have to do and get what efficiently and effectively required rather than what they may satisfy with. On the other hand, the second stream of management non-specialist practitioners used to look at majors and specialist as being theoretically oriented all the time, rather than being involved with work reality and its relevant renewal requirements, which sometimes come faster than the development of the theory. As so, we are in the front of a gap of misunderstanding and may be suspicion to fill up between the two parties concerning the adoption of the correct management concept. This gap is negatively supported and/or enlarged by three important factors to be taken into consideration as well.

First, the gelatinous nature of management concept that makes it historically comes oriented by the definitions of the different schools of management thought. Those include the scientific management, the bureaucracy management, the human relations management, management by situations or contingency approach, the systems approach, management by objectives, management by exception, functional management, strategic management and too many other branched or derivative ones. This makes it hard for the academic majors and specialists to have a very commonly agreeable concept to management. As a consequence it could be claimed that it was harder for them to provide the work reality or organizations non-specialist managers with a relatively common concept.

Second, the retardation that's touching all the life aspects in the third word countries - like Egypt - is unavoidable factor as well. Particularly, in the case of motivating management non-specialist practitioners to compensate the shortage they have in area of management background. Since people are generally sticking with the backgrounds they have more than looking forward to other fields of knowledge. Even if this is something critically required. They prefer - as reality reflects - to be single-loop learners rather than double-loop ones. In other words people like to apply their own espoused theories not the theory that should be in use. Third, the lagging in utilizing the managerial advisory work, that's occurred either due to the inability of practitioners to identify what they are actually in need for or due to inability of academic specialists to have an opportunity for investigating and diagnosing the formers' real problems. This - by the time - was a reason of creating sort of false self-sufficiency and **desists** from the two parties.

Getting the Academic Management Concept More Practically
 Perceived: an Epistemologically Extended Approach

Dr. Amgad Hamed Omara

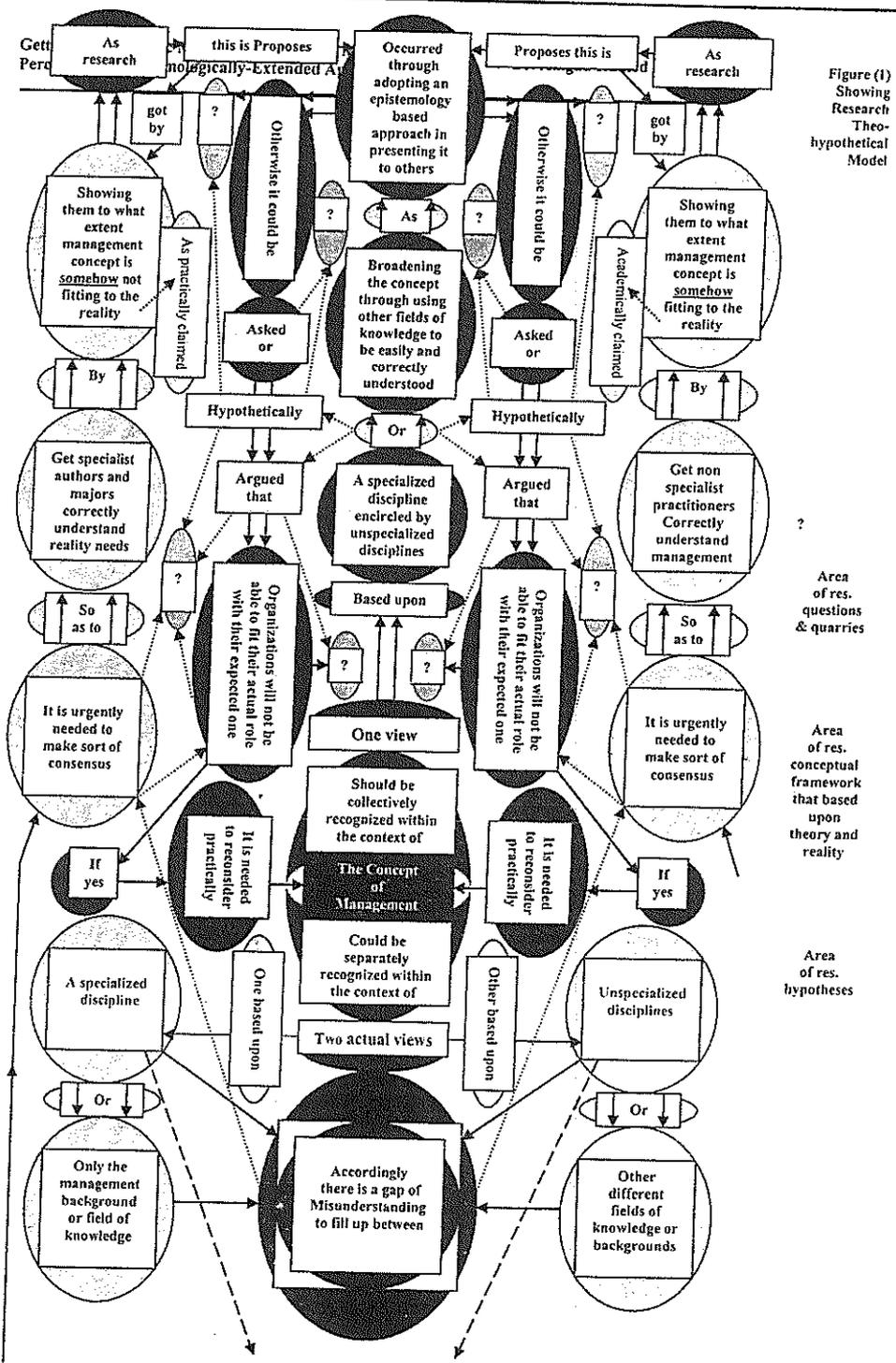


Figure (1)
 Showing
 Research
 Theo-
 hypothetical
 Model

Area
 of res.
 questions
 & queries

Area
 of res.
 conceptual
 framework
 that based
 upon
 theory and
 reality

Area
 of res.
 hypotheses

Bearing in mind that the exchange claims and accusations usually provided by the two parties are reasonably true, and also taking into account the above gap negatively-widening factors, this research concerns with creating sort of consensus between the two parties around such an issue. On the one hand, it strives to get non-specialist practitioners correctly recognized the management concept. Through showing them to what extent this concept is somehow fitting the reality. On the other hand, to get the specialist, authors and majors of management more understand to the work reality. Through showing them to what extent management concept is somehow does not fitting the real needs of organizations.

Theo-hypothetical model of this research that's shown by Figure (1) investigates to what extent this gap could be filled up through reconsidering practically the way of presenting the concept of management, so as to make it more acceptable and easily recognized by those non-specialist practitioners. It hypothetically proposes an epistemologically-based approach to be employed in presenting more perceivably the management concept.

The suggested approach will consider broadening the concept to its governing detailed aspects and axes. In conjunction with this, working on simply explaining these aspects in the light of the originally specialized field of knowledge or management largely encircled as much as possible by the other fields of knowledge. Those are fitting the wide backgrounds of management non-specialist practitioners.

The research model that's based upon a double facet conceptual framework is hypothetically gone into two important research questions; first, does the failure of organizations in playing their role as expected by them could be justified by their managers wrong adopting to the incorrect concept of management? Second, are these managers practically in need to recognize the correct concept of management simply within the context of an epistemologically-extended approach? These are the two areas of research quarries and hypotheses.

Research field study:

The variable inter-relationship that's based upon functioning a mediator in formulating the research two hypotheses was a logically sufficient reason to subject the primarily collected data to sort of path analysis, for statistically investigating the hypotheses. As the independent variable in the first hypothesis – **that's the lack of the governmental hospitals top managers' motivation to adopt and apply an academically-based rather than self-based concept of management** - has to be statistically testified so as to explain the dependent variable in the same hypothesis – **that's the lack of congruency between the role actually done and the**

role to be done by these hospitals. It has also been used again as dependent variable in the second hypothesis to be explained by another independent variable – that's the managers' need for more epistemologically considerable and easily applicable concept of management rather than specifically specialized and hardly applicable one. The statistic testing process has to be conducted as follows:

• Testing the first hypothesis:

Do the lack of congruency between the role done and the role to be done by the governmental hospital is due to the lack of adopting the academically right concept of management?

This was testified in detail through examining the relationship between variable (A) collectively represented by the Mode of its sub-variables (from a1 to a10) and the variable (B) separately represented in detail by all the variables (b1, b2, b3, b4, b5, b6, b7, b8, b9, b10) those were contained by it. Within such a context the data is presented, statistically analyzed and interpretatively discussed as follows:

Table (5) Relationship between the dependent v. (A) and the independent v. (B)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal.	Sig.	Cal.	Sig.	Cal.	Sig.	Cal.	Sig.	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co	Co. R ²
A&b1	373.27	0.00	308.34	0.00	153.18	0.00	909.70	0.00	1.01	30.16	0.00	0.91	0.83
A&b2	432.49	0.00	367.39	0.00	158.29	0.00	1126.47	0.00	0.95	33.56	0.00	0.93	0.86
A&b3	438.54	0.00	345.27	0.00	150.75	0.00	829.73	0.00	1.07	28.81	0.00	0.91	0.82
A&b4	308.64	0.00	287.73	0.00	148.94	0.00	777.41	0.00	1.40	27.88	0.00	0.90	0.81
A&b5	506.27	0.00	393.56	0.00	169.39	0.00	2121.25	0.00	0.97	46.06	0.00	0.96	0.92
A&b6	528.76	0.00	414.61	0.00	170.53	0.00	2316.16	0.00	0.98	48.13	0.00	0.96	0.93
A&b7	422.59	0.00	336.54	0.00	158.27	0.00	1125.51	0.00	1.03	33.55	0.00	0.93	0.86
A&b8	355.47	0.00	303.56	0.00	148.34	0.00	761.18	0.00	1.08	27.59	0.00	0.90	0.81
A&b9	473.11	0.00	414.92	0.00	171.30	0.00	2469.04	0.00	0.91	49.69	0.00	0.97	0.93
A&b10	444.69	0.00	364.89	0.00	160.67	0.00	1260.17	0.00	1.07	35.50	0.00	0.93	0.87

Source: Based upon empirical study

The null sub-hypothesis (1) that was based upon the non-existence of significant relationship between the **lack of congruency between the role actually done and the role to be done by the governmental hospitals and the lack of their top managers' motivation to adopt and apply an academically-based rather than self-based concept of management** was refused. On contrary the alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to many phases.

At the level of significance or generalization on the whole population, this relationship has significantly been certified, as the minimum calculated value of $(Ch)^2$ according to both person and likelihood were (308.64) and (287.73) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all times, this is shown by Table (5).

At the level of denotation, this relationship has been confirmed as statistically indicative one. In terms of the type it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (761.18) and (27.59) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order at the level of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the form was linear. Since the lowest value of linear by linear $(Ch)^2$ was (148.34) > its tabulated one that's previously mentioned, at the same level of sig. or (0.05), with a df equal to (16) while sig. or (p) was approximately (0.00) in all times as well. The direction of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.91) and (+1.40). Furthermore, it was strong in terms of the direction and the form, since the lowest values of both (R) and $(R)^2$ were (0.90) and (0.81) respectively. Those were positive and > (0.85) in the case of (R), while they were far > (0.50) in the case of $(R)^2$. All these values could be shown in detail by the same Table (5).

Statistical verification of such a relationship could be analytically justified; when considering that the lack of hospitals top managers' motivation to adopt an academic concept to management may return to the lack of capability to adopt such a concept. This in turn could be a function of many factors to be collectively expressed through the following axes:

- Those managers are not specialists in the field of management that's why most of them hardly capable to recognize academically the concept of management.

- There is undeniable magnitude of complexity and confutation in the management concept due to the different schools that have tackled historically this concept in the relevant literature and theory.
- There is a false satisfaction concerning the real levels of hospitals performance that's based upon personal or subjective criteria rather than using efficiency and effectiveness as true and calculable measures to performance.
- There is a lack of awareness concerning the management as a field of knowledge that needed to be utilized and urgently applied for running the work in service organizations.
- There is lack of interest concerning the improvement in managerial aspects compared with the technical ones; this is actually gone with the technical nature of the managers' background as doctors who are specialist in the field of medicine.
- There is unjustifiable amount of managers' resistance to adopt the management concept due to the importance of work involvement rather than the interest of work improvement.

These above mentioned axes could be considerably summarized if it is recognized that the main sanction in the front of adopting such a concept is the complication of the specialized way used in introducing it. In other words, is there a need for introducing this concept to others in an epistemologically extended way that simply utilized different fields of knowledge to be easily fitting to the dissimilar backgrounds of management non-specialist managers? This will be statistically investigated, based upon the real data, through testing the next second hypothesis of research.

• **Testing the second hypothesis:**

Do the lack of governmental hospital top managers' adoption to the academically right concept of management is due to their need for more epistemologically simplified concept rather than the hardly got specialized one?

This was testified in detail through examining the relationship between variable (B) collectively represented by the Mode of its sub-variables (from b1 to b10) and the variable (C) separately represented in detail by all its (80) sub-sub variables - coded in questionnaire from (c1/1 to c16/5) - those were categorized into (16) groups of (5) sub-sub-variable each, to be contained by the sub-variable (c1, c2, c3, c4, c5, c6, c7, c8, c9, c10, c11, c12, c13, c14, c15 and c16).

Due to the relatively big number of the sub-variable and sub-sub-variables contained by them, it was taken into account to testify the second hypothesis by examining (16) sub-hypotheses, those are representing the relationship between the variable (B) and every single one of the previously mentioned (16) sub-variables.

Committing with the same way of presenting data, showing the statistical analysis and interpretatively providing the relevant discussion, this hypothesis different processes of examination were to be more simply explored as follows:

▪ **Testing the hypothesis (2/1)**

The null sub-hypothesis (2/1) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "trying versus repeating" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (6) Relationship between the dependent v. (B) and the independent v. (C1)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R	R ²
B&c1/1	373.27	0.00	308.34	0.00	153.18	0.00	909.70	0.00	1.01	30.16	0.00	0.91	0.83
B&c1/2	432.49	0.00	367.39	0.00	158.29	0.00	1126.47	0.00	0.95	33.56	0.00	0.93	0.85
B&c1/3	438.54	0.00	345.27	0.00	150.75	0.00	829.73	0.00	1.07	28.81	0.00	0.91	0.82
B&c1/4	308.64	0.00	287.73	0.00	148.94	0.00	777.41	0.00	1.40	27.88	0.00	0.90	0.81
B&c1/5	506.27	0.00	393.56	0.00	169.39	0.00	2121.25	0.00	0.97	46.06	0.00	0.96	0.92

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of $(Ch)^2$ according to both person and likelihood were (308.64) and (287.73) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (6).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (777.41) and (27.88) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92,) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear $(Ch)^2$ was (148.94) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.95) and (+1.40). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and $(R)^2$ were (0.90) and (0.81) respectively. Those were positive and > (0.9) in the case of (R), while they were far > (0.50) in the case of $(R)^2$. All these values could be shown above in detail by the same Table (6).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- o Management is the process that's commonly characterized as targeted, future involved, universal, generally applicable, comprehensive, successive, integrated, time-pounded, , and continuous.

- Whether Management is a multi-characterized process, it should substantially base upon a core characteristic to be continuously practiced which is trying.
- In management, when trying, people may get the right, represented in fully achieving the objectives, but it is an exceptionally extreme case.
- In management, when trying, people may get the wrong, represented in the failure to get objectives or at least highly deviating from them, but it is an exceptionally extreme case as well.
- In management, when trying, people may simultaneously get right and wrong, represented in achieving objectives but somehow deviating from them, this is the normally occurred case.
- Management considers a little room for an allowed deviation from the targeted objectives, that's why it is preferable to say when managers try they should get right plus wrong rather than saying right and wrong, they should not equally occurs.
- Management is not that definitely pure science, that's mostly based upon basics and bases, while hardly allows a small room for free creation. It is unlike chemistry or physics.
- Management is not that definitely pure art that's mostly based upon no basics and bases while hardly has a very small room for them. It is unlike music and abstract arts.
- Management is definitely a mix of both science and art, both of them are equally important while not equally practiced. The governing conditions in applying each are most probably return to the situation.
- Management could be considered as a science as long as we have bases to use while it is an art as long as we miss bases to use. The situation is identifying the priority of either.
- Whether management is considered neither as a pure science nor as a pure art it could be considered as a **theory**, it is academically called - in references - management theory. Trying is indicating management as a theory.
- Whether management is academically considered as theory, it should practically applied as a theory as well, that's flexibly available for taking, taking off or dropping, adjusting or tailoring, and also adding to, in accordance with the practitioner view and the situation faced by him.
- Repeating is a process in which people are following pre-set common bases to function for making introductions lead to fixed

results, i.e. adding oxygen to hydrogen according to the H₂O equation result in water and nothing but water.

- Considering the above mentioned explanations trying is not such a previous case, since managers may have some basics, and if any, they will be their individually own bases rather than common ones, particularly in the certain situations they are dissimilarly faced with.

▪ **Testing the hypothesis (2/2)**

The null sub-hypothesis (2/2) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "exploiting versus using resources" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (7) Relationship between the dependent v. (B) and the independent v. (C2)
Source: Based upon empirical study

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R	R ²
B&c2.1	441.49	0.00	346.59	0.00	163.92	0.00	1493.82	0.00	0.97	38.65	0.00	0.94	0.89
B&c2.2	562.64	0.00	408.07	0.00	176.35	0.00	4221.02	0.00	0.99	64.97	0.00	0.98	0.96
B&c2.3	474.08	0.00	369.89	0.00	166.76	0.00	1770.02	0.00	0.89	42.07	0.00	0.95	0.91
B&c2.4	374.53	0.00	280.45	0.00	155.05	0.00	980.75	0.00	1.00	31.31	0.00	0.92	0.84
B&c2.5	590.07	0.00	365.45	0.00	173.63	0.00	3055.09	0.00	0.97	55.36	0.00	0.97	0.94

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (374.53) and (280.45) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The

sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (7).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (980.15) and (31.31) in order $>$ their parallel tabulated values, which were for (F) and (T) equal to (3.92,) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (155.05) $>$ its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.89) and (+1.00). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (0.92) and (0.84) respectively. Those were positive and $>$ (+0.9) in the case of (R), while they were far $>$ (0.50) in the case of (R)². All these values could be shown above in detail by the same Table (7).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management used to deal with two main resources, the human and the non-human resources. Management interest should be oriented with such a two-sort focusing.
- Exploiting people is initially indicating something negative, but considering them as human resources oppositely gives a very positive meaning.
- Management is originally a process that's directed to the people or human resources.
- Management has to consider the priority when dealing with the organizational resources, it should directly deal with the human

resources while indirectly deal with the non human ones. The first is a locomotive to run the second.

- Management has to consider that managing the human resources is definitely justified by managing the non human ones. It manages the human resources because of the nonhuman ones.
- Management should not be involved in using resources, since the usage means that it is completely free in using them without committing with a particular condition.
- Management should alternatively be involved in exploiting resources, since the exploitation means that it is allowed to use them in accordance with a particular condition.
- Management should take into account that the particular condition it is asked to commit with is nothing but efficiency.

▪ **Testing the hypothesis (2/3)**

The null sub-hypothesis (2/3) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "**efficiency versus optimality**" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (8) Relationship between the dependent v. (B) and the independent v. (C3)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	R ²
B&c3.1	376.46	0.00	372.71	0.00	153.49	0.00	920.65	0.00	0.75	30.34	0.00	0.91	0.83
B&c3.2	490.97	0.00	382.94	0.00	170.10	0.00	2239.80	0.00	0.93	47.33	0.00	0.96	0.92
B&c3.3	518.16	0.00	419.97	0.00	171.91	0.00	2602.43	0.00	0.89	51.01	0.00	0.97	0.93
B&c3.4	351.38	0.00	324.31	0.00	146.50	0.00	714.86	0.00	0.73	26.74	0.00	0.89	0.80
B&c3.5	505.87	0.00	384.81	0.00	173.81	0.00	3122.37	0.00	0.95	55.88	0.00	0.97	0.94

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of

$(Ch)^2$ according to both person and likelihood were (361.36) and (324.31) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (8).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (714.86) and (26.74) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear $(Ch)^2$ was (146.50) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.73) and (+1.05). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and $(R)^2$ were (0.89) and (0.80) respectively. Those were positive and > (+0.85) in the case of (R), while they were far > (0.50) in the case of $(R)^2$. All these values could be shown above in detail by the same Table (8).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that that the condition to commit with when exploiting resources is to use them according to what is exactly required.
- Management should consider that what is exactly required could be identified according to the evaluation of alternative needs, or what is urgently needed.

- Management should consider that what is urgently needed has to be recognized by continually mapping the organization needs.
- Management should consider that meeting what is urgently needed, allowing the condition of efficiency in resource exploitation.
- Although they are doing their best, governments used to be accused with shortage. The reason is most probably returning to their use for resources to meet non-urgent needs rather than exploiting these resources in meeting the urgent ones. The third world core management problem, that's drawn on the organizations as well, is between using and exploiting resources.
- Management of organization should consider that optimality is relative and commonly immeasurable while efficiency is precisely measurable.
- Efficiency is the law to follow and commit with, for exploiting resources rather than using them..

▪ **Testing the hypothesis (2/4)**

The null sub-hypothesis (2/4) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "feasible versus available resources" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (9) Relationship between the dependent v. (B) and the independent v. (C4)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c4.1	516.30	0.00	378.15	0.00	171.63	0.00	2539.98	0.00	0.95	50.40	0.00	0.97	0.93
B&c4.2	478.82	0.00	389.20	0.00	170.69	0.00	2347.77	0.00	0.89	48.45	0.00	0.96	0.93
B&c4.3	482.16	0.00	383.36	0.00	167.71	0.00	1859.47	0.00	0.86	43.40	0.00	0.96	0.91
B&c4.4	457.75	0.00	379.42	0.00	173.16	0.00	2923.67	0.00	0.87	54.07	0.00	0.97	0.94
B&c4.5	422.29	0.00	374.34	0.00	170.13	0.00	2244.71	0.00	0.88	47.38	0.00	0.96	0.92

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of $(Ch)^2$ according to both person and likelihood were (442.29) and (374.34) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (9).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (1883.47) and (43.40) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear $(Ch)^2$ was (167.71) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.87) and (+0.96). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and $(R)^2$ were (0.96) and (0.91) respectively. Those were positive and > (+0.95) in the case of (R), while they were far > (0.50) in the case of $(R)^2$. All these values could be shown above in detail by the same Table (9).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- o Management should not consider only the available resources, that may be allowed for now, it is not a matter of bird in hand.

- Management should consider the transferable, the available, and the expected resources; it is a matter of considering not only what is available but also what is feasible.
 - Management should consider the feasibility in managing the organization resources the same as it was considered when organization was in the project phase.
 - Management should consider that organizations borne as projects, that are subject to feasibility studies before being able to exist and work on resources as organizations. Projects are the fetuses of organizations.
 - Management should consider that as long as they are in need for making decisions to exploit resources, they will be in need for making feasibility studies; it is inevitably the continuous task.
 - Management should consider that the decisions taken for exploiting resources are logically new projects or in other words emerging sub-projects that have to subject normally to feasibility rather than availability studies.
- **Testing the hypothesis (2/5)**

The null sub-hypothesis (2/5) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "**organizational versus individual work**" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases

Table (10) Relationship between the dependent v. (B) and the independent v. (C5)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c5.1	490.82	0.00	395.20	0.00	169.20	0.00	2092.89	0.00	0.92	45.75	0.00	0.96	0.92
B&c5.2	449.94	0.00	370.04	0.00	165.72	0.00	1659.05	0.00	0.84	40.73	0.00	0.95	0.90
B&c5.3	447.50	0.00	361.51	0.00	166.23	0.00	1711.70	0.00	0.87	41.37	0.00	0.95	0.90
B&c5.4	478.92	0.00	347.33	0.00	166.25	0.00	1714.05	0.00	0.93	41.40	0.00	0.95	0.90
B&c5.5	461.21	0.00	387.61	0.00	170.65	0.00	2339.44	0.00	0.88	48.37	0.00	0.96	0.93

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of $(Ch)^2$ according to both person and likelihood were (447.50) and (347.33) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (10).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (1659.05) and (40.73) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear $(Ch)^2$ was (165.72) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.84) and (+0.97). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and $(R)^2$ were (+0.95) and (0.90) respectively. Those were positive and > (+0.90) in the case of (R), while they were far > (0.50) in the case of $(R)^2$. All these values could be shown above in detail by the same Table (10).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that the works to be performed, generally in life, could be classified into two sorts. One to be

perfectly done by an individual based upon his brain. The other couldn't be done but through at least two individuals or may be more.

- Management has to consider that the work to be performed perfectly by just an individual, should not subject to the interest of management, unless we consider that management as an artificial system is better than human brain as a natural one for managing such sort of work. Soloist cannot be managed for himself, whereas it is needed to manage him only when involving as a member in music band or team.
- Management should consider that the work to be performed by more than one individual should subject to management interest, that's because we cannot have a grantee concerning the cooperation amongst the group of people collectively involved in performing such a sort of work.
- Management should consider that cooperation is the core task to do in order to get the organizational group-work effectively performed. The cooperation amongst the organization members should not left to the sudden or to be automatically happened, it should be intentionally separated from the other forms of social behavior to be particularly dealt with by using the management factor.
- Management should consider that the more the capability of occurring the cooperation, the more the formal organization, the more the stability of organization, and vice versa. The less the capability of occurring the cooperation, the more the informal organization, the less the stability of organization, the more the probability of its decline.
- Management should consider that as long as organizations are born to live not to die – early without full life cycle – they should take into consideration that informal organizations are the anti-co-operational viruses threatening their life.
- Management should consider that cooperation is the hub of organizational work; it is a matter of necessity.

▪ **Testing the hypothesis (2/6)**

The null sub-hypothesis (2/6) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand,

their need for epistemologically considering the conceptual issue of "work through versus by others" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (11) Relationship between the dependent v. (B) and the independent v. (C6)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c6.1	443.07	0.00	339.44	0.00	162.87	0.00	1410.39	0.00	0.97	37.56	0.00	0.94	0.89
B&c6.2	573.10	0.00	412.65	0.00	176.17	0.00	4115.96	0.00	0.96	64.16	0.00	0.98	0.96
B&c6.3	470.26	0.00	372.92	0.00	170.47	0.00	2305.65	0.00	0.91	48.02	0.00	0.96	0.93
B&c6.4	486.09	0.00	352.14	0.00	166.29	0.00	1718.25	0.00	0.95	41.45	0.00	0.95	0.90
B&c6.5	488.21	0.00	397.64	0.00	171.64	0.00	2541.74	0.00	0.90	50.42	0.00	0.97	0.93

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (443.07) and (339.44) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (11).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (1410.39) and (37.56) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (162.87) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the

values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.90) and (+0.97). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.94) and (0.89) respectively. Those were positive and $> (+0.90)$ in the case of (R), while they were far $> (0.50)$ in the case of (R)². All these values could be shown above in detail by the same Table (11).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should be looked at as a communication process that interactively occurs between two wise parties; the manager and his subordinator.
- Management should consider that the two parties - the manager and his subordinator - are important for the organization, even if the manager is mostly looked at as more important.
- Management should consider that the subordinator importance is actually stemming not only from his work but also the manager's need, when necessarily, to delegate most of his work to him. The subordinator importance is raised to the level of delegation importance in management.
- Management should consider that the subordinator has to work in a different way compared with his manager, either when doing his own work or the work delegated by his manager; this is logically occurred because he is a different person.
- Management should consider that both the means and results are important in performing work but the latter should be given the priority to the first.
- Management should consider that the accumulation of management thought history has denied dealing with subordinators as machines, the work done by instead through them. This is recommended in all the schools of management successively come after the school of scientific management.

- o Management should consider that most of the advanced schools of management, while restricting the role of manager they extending the role of his subordinator. Just to show that he is trustworthy to work through rather than by.

▪ **Testing the hypothesis (2/7)**

The null sub-hypothesis (2/7) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "**practicing versus experiencing**" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (12) Relationship between the dependent v. (B) and the independent v. (C7)

No. of var.	Testifying the relationship						Testifying its denotation							
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree							
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²	
B&c7.1	456.54	0.00	372.54	0.00	168.61	0.00	2005.29	0.00	0.91	44.78	0.00	0.96	0.92	
B&c7.2	514.35	0.00	373.76	0.00	169.91	0.00	2206.32	0.00	0.98	46.97	0.00	0.96	0.92	
B&c7.3	439.78	0.00	283.26	0.00	159.77	0.00	968.80	0.00	0.91	31.13	0.00	0.92	0.84	
B&c7.4	469.91	0.00	385.25	0.00	165.83	0.00	1670.28	0.00	0.88	40.87	0.00	0.95	0.90	
B&c7.5	489.69	0.00	371.10	0.00	166.09	0.00	1696.70	0.00	0.95	41.19	0.00	0.95	0.90	

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (439.78) and (2834.26) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (12).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents

sort of causality, since the lowest values of both the calculated (F) and (T) were (968.80) and (31.13) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (154.77) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.86) and (+1.01). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.92) and (0.84) respectively. Those were positive and > (+0.90) in the case of (R), while they were > (0.80) in the case of (R)². All these values could be shown above in detail by the same Table (12).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that practicing is a pre-requisite condition for getting things efficiently done; when you manage you have to have yourself sufficiently practiced.
- Management should consider that getting managers practiced in work, is a function in making them sufficiently exposed to a set of factors; position, time, place, knowledge, and experience. Experience is just one condition for managing efficiently.
- Management should consider that experience is an important condition for managing efficiently, but it is required as only one condition within the context of the other practicing conditions. These conditions are interactively working.
- Management should consider that the more the practical information got by someone concerning certain work – from how to smile to how technically it is performed – the more the

capability he may have in managing such a work. It is a factor of experience.

- Management should consider that the more the time spent by someone in certain work the more the capability he may have in managing such a work. It is a factor of time.
- Management should consider that the more the familiarity of someone, concerning certain place of work, the more the capability he may have in managing such a work. It is a factor of place.
- Management should consider that the more the managerial knowledge or background of someone in the field of certain work, the more the capability he may have in managing such a work. It is a factor of management specialization.
- Management should consider that the more the sticking of someone in certain position of work, the more the capability he may have in managing such a work. It is a factor of position.

▪ **Testing the hypothesis (2/8)**

The null sub-hypothesis (2/8) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "**behavioral versus technical functions**" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (13) Relationship between the dependent v. (B) and the independent v. (C8)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c8.1	474.70	0.00	371.41	0.00	165.58	0.00	1643.42	0.00	0.98	40.54	0.00	0.95	0.90
B&c8.2	573.10	0.00	412.65	0.00	176.17	0.00	4115.96	0.00	0.96	64.16	0.00	0.98	0.96
B&c8.3	482.16	0.00	383.36	0.00	167.71	0.00	1883.47	0.00	0.96	43.40	0.00	0.96	0.91
B&c8.4	443.73	0.00	375.92	0.00	171.80	0.00	2577.42	0.00	0.87	50.77	0.00	0.97	0.93
B&c8.5	543.94	0.00	382.62	0.00	174.50	0.00	3360.55	0.00	0.95	57.97	0.00	0.97	0.95

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of $(Ch)^2$ according to both person and likelihood were (443.73) and (371.41) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (13).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (1643.42) and (40.54) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear $(Ch)^2$ was (165.56) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.87) and (+0.96). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and $(R)^2$ were (+0.95) and (0.90) respectively. Those were positive and > (+0.90) in the case of (R), while they were far > (0.50) in the case of $(R)^2$. All these values could be shown above in detail by the same Table (13).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- o Management should consider that managerial functions could technically classify into four broad categories of functions that

commonly known as planning, organizing, directing and controlling.

- Management should consider that planning as a technical function is commonly concerned with the issues such as organization philosophy, mission, strategy, objectives, policies, programs, tactics, procedures, techniques and others.
- Management should consider that organizing as a technical function is commonly concerned with issues such as; specifying activities, units and departments, specializations, authorities, responsibilities, relations, structure, directory and others.
- Management should consider that directing as a technical function is commonly concerned with issues such as; instructions and orders, communication, motivation, leadership, dealing with the informal organizations and others.
- Management should consider that controlling as a technical function is commonly concerned with issues such as; criteria and standards, measures, measurements tools and techniques, actual performance, comparison, permitted and non-permitted deviations, corrections of deviations or standards, and others.
- Management should consider that managerial functions are not only restricted in technical ones but also there are behavioral functions. Since the milestone in management process is to get the behavior of people directed toward the organization's objectives.
- Management should consider that the behavior of people, as an object or variable it works on, is uncountable and may be endless, concerning both the sort and number. Accordingly behavioral functions of management are endless as well.
- Management should consider that despite the endless of management behavioral functions it could be relatively classified - just to get them easily understood - into categories such as deeds, says, motions, emotions, interactions, intimations, hints, imitations, examples, body language, behaviors, perceptions, tendencies, attitudes, and others. Getting closed to this proposition consider eye look as management function.

▪ **Testing the hypothesis (2/9)**

The null sub-hypothesis (2/9) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "

original versus derivative activities" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (14) Relationship between the dependent v. (B) and the independent v. (C9)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c9.1	471.02	0.00	367.56	0.00	165.10	0.00	1598.95	0.00	0.88	39.99	0.00	0.95	0.90
B&c9.2	482.16	0.00	383.36	0.00	167.71	0.00	1883.47	0.00	0.96	43.40	0.00	0.96	0.91
B&c9.3	514.35	0.00	373.76	0.00	169.91	0.00	2206.32	0.00	0.98	46.97	0.00	0.96	0.92
B&c9.4	473.95	0.00	379.03	0.00	169.13	0.00	2081.77	0.00	0.93	45.63	0.00	0.96	0.92
B&c9.5	504.38	0.00	405.41	0.00	175.01	0.00	3562.94	0.00	0.91	59.69	0.00	0.98	0.95

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (471.02) and (367.56) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (14).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (1598.95) and (39.99) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (165.10) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the

values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.88) and (+0.98). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.95) and (0.90) respectively. Those were positive and > (0.90) in the case of (R), while they were far > (0.50) in the case of (R)². All these values could be shown above in detail by the same Table (14).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortless awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that the activities to be done by the organizations - whatever their philosophy and nature - include marketing, production, financing, supplying, and human resource.
- Management should consider that when the organization activities apparently look different because of their fieldwork's technical nature, as happened in hospitals for instance, they should not be believed in by the managers as originally different.
- Management should consider that it is a matter of necessity to look at the technical works within the context of their original classification, unless this orientation is carefully settled managers - by the time - will be deviated from the basic knowledge that's allowed to apply in every certain area.
- Management should consider that, the more organization accumulatively used to ignore committing with returning their technical activities back to their original classification, the more the failure in considering how to manage them, the more the inability to get effectively the required objectives.
- Management should consider that, the technical nature of organizations' activity should not get them deviated far away from their original activity nature.

▪ **Testing the hypothesis (2/10)**

The null sub-hypothesis (2/10) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the

academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "ordering versus priority" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (15) Relationship between the dependent v. (B) and the independent v. (C10)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c10.1	439.85	0.00	373.86	0.00	170.08	0.00	2236.83	0.00	0.87	47.30	0.00	0.96	0.92
B&c10.2	431.53	0.00	365.57	0.00	163.42	0.00	1453.45	0.00	0.96	38.12	0.00	0.94	0.89
B&c10.3	550.77	0.00	375.92	0.00	173.46	0.00	3010.27	0.00	0.94	54.87	0.00	0.97	0.94
B&c10.4	532.94	0.00	362.03	0.00	171.82	0.00	2580.57	0.00	0.96	50.80	0.00	0.97	0.93
B&c10.5	479.49	0.00	379.26	0.00	171.88	0.00	2594.82	0.00	0.91	50.94	0.00	0.97	0.93

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both Pearson and likelihood were (431.53) and (362.03) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (15).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (1453.45) and (38.12) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (163.42) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this

relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.87) and (+0.96). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.94) and (0.89) respectively. Those were positive and $> (+0.90)$ in the case of (R), while they were far $> (0.50)$ in the case of (R)². All these values could be shown above in detail by the same Table (15).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortlessly awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that production and marketing are the two activities of organization that are used to have first level of ranking while the other three activities of finance, human resources, and supply used to have the second level of ranking.
- Management should consider that ranking production and marketing before other activities is actually justified according to the need; organization will be in need for other activities just because of their need to production and marketing. It is a matter of need ordering.
- Management should consider that when executing these five activities we need to set up finance, human resource and supply before being able to execute production and marketing. This reasoning the confusion actually faced by the managers, which result in different orientations of activity-focus.
- Management should consider that the five activities of organization although they may have different ranking priorities according to the certain manager perspective, it has to be highlighted that these activities are equally have the same priority of important.
- Management should consider that wedding day is the most important day in cable marriage life, but both of them have met each other one day before, the day they have met each other, which is less important, comes before the day they have got married which is the most important.

▪ Testing the hypothesis (2/11)

The null sub-hypothesis (2/11) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "so as to versus to attain objectives" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (16) Relationship between the dependent v. (B) and the independent v. (C11)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c11.1	480.08	0.00	403.32	0.00	175.87	0.00	3957.11	0.00	0.90	62.91	0.00	0.98	0.96
B&c11.2	527.06	0.00	395.61	0.00	172.10	0.00	2645.84	0.00	0.96	51.44	0.00	0.97	0.94
B&c11.3	528.39	0.00	406.79	0.00	175.81	0.00	3928.15	0.00	0.93	62.67	0.00	0.98	0.96
B&c11.4	430.36	0.00	363.60	0.00	169.31	0.00	2109.90	0.00	0.88	45.93	0.00	0.98	0.92
B&c11.5	590.08	0.00	391.73	0.00	175.80	0.00	3921.32	0.00	0.99	62.52	0.00	0.98	0.96

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (430.36) and (363.60) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (16).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (2109.90) and (45.93) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively.

The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (169.31) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.88) and (+0.99). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.96) and (0.92) respectively. Those were positive and > (+0.95) in the case of (R), while they were far > (0.50) in the case of (R)². All these values could be shown above in detail by the same Table (16).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortlessly awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that objectives cannot be attained immediately; alternatively it has to start the process of attaining them immediately. Getting the objectives attained is something conditional.
- Management should consider that conditions of attaining objectives are not only restricted in satisfying their commonly known characteristics, like accessibility, measurability and others but also include managerial relevant conditions.
- Management should consider that there is a required period of time for getting the goals attained. Objectives used to be attained in short, moderate or long run. Management has to fit the time allowed for attaining them.
- Management should consider that objectives will not be attained before exerting too much effort that has to be done sharing between the managers and employees.
- Management should consider that objectives will not be attained before efficiently allocating the material resources, particularly the required budgeting and financial resources.

- Management should consider that objectives will be more often than not fully attained, managers should professionally involve in assessing the room allowed to deviate from objectives. Otherwise the untrue recognized failure will turn later on to a true one.

▪ **Testing the hypothesis (2/12)**

The null sub-hypothesis (2/12) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "effectiveness versus success" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (17) Relationship between the dependent v. (B) and the independent v. (C12)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	R ²
B&c12.1	532.67	0.00	391.20	0.00	173.46	0.00	3010.73	0.00	0.98	54.87	0.00	0.97	0.94
B&c12.2	510.05	0.00	396.62	0.00	176.00	0.00	4024.33	0.00	0.93	63.44	0.00	0.98	0.96
B&c12.3	521.09	0.00	368.00	0.00	169.36	0.00	2116.53	0.00	0.97	46.01	0.00	0.96	0.92
B&c12.4	515.67	0.00	389.85	0.00	171.66	0.00	2645.74	0.00	0.92	50.46	0.00	0.97	0.93
B&c12.5	415.60	0.00	347.35	0.00	158.81	0.00	1153.59	0.00	0.97	33.95	0.00	0.93	0.86

Source: Based upon empirical stud

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (415.60) and (347.35) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (17).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one-s well. In terms of the **type**, it represents

sort of causality, since the lowest values of both the calculated (F) and (T) were (1153.59) and (33.96) in order $>$ their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (158.81) $>$ its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.81) and (+0.98). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.93) and (0.86) respectively. Those were positive and $>$ (+0.90) in the case of (R), while they were far $>$ (0.50) in the case of (R)². All these values could be shown above in detail by the same Table (17).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortlessly awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that effectiveness is the governing law to follow in judging the success of organizations; it is the objectively measurable criteria to assess the attainment of objectives.
- Management should consider that the effective organization is the one that getting its objectives attained as planned both quantitatively and qualitatively. Considering permitted deviation, there will not be any more or less.
- Management should consider that using other criteria in judging the organizations capability concerning the objectives attainment, will be deceiving.
- Management should consider that, using personal views to judge the success of organizations should be maximum a subjective way in assessing the attainment of objectives.

- Management should consider that, using personal views to judge the success of organizations should be at large an explanatory supportive not essential.

▪ **Testing the hypothesis (2/13)**

The null sub-hypothesis (2/13) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "means versus objectives" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (18) Relationship between the dependent v. (B) and the independent v. (C13)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co R ²
B&c13.1	540.44	0.00	377.37	0.00	172.63	0.00	2777.98	0.00	0.92	52.71	0.00	0.97	0.94
B&c13.2	488.00	0.00	359.88	0.00	170.97	0.00	2401.32	0.00	1.03	49.00	0.00	0.96	0.93
B&c13.3	530.27	0.00	404.86	0.00	175.05	0.00	3579.87	0.00	0.97	59.83	0.00	0.98	0.95
B&c13.4	440.73	0.00	374.14	0.00	169.96	0.00	2215.12	0.00	0.86	47.07	0.00	0.96	0.92
B&c13.5	488.64	0.00	395.32	0.00	167.71	0.00	1884.13	0.00	0.81	43.41	0.00	0.96	0.91

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (440.73) and (359.88) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (18).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (1884.13) and (43.41) in order > their parallel tabulated

values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (167.71) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.81) and (+1.03). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (\bar{R}) and (\bar{R})² were (+0.96) and (0.91) respectively. Those were positive and > (+0.95) in the case of (\bar{R}), while they were far > (0.50) in the case of (\bar{R})². All these values could be shown above in detail by the same Table (18).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortlessly awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that it works for relatively arranged objectives, based upon tangibility to intangibility these could be as follows; score, hit, effect, target, objectives goals, results, aim, intent, purposes, and ends. These are attained gradually on phases.
- Management should consider that the more the tangibility, that may perceived in the case of score, hit, effect, target, objectives and goals the more the measurability they have, the more the capability allowed to management to work on the means to get them attained, and vice versa.
- Management should consider that the less the tangibility, that may perceived in the case of results, aim, intent, purposes, and ends the less the measurability, the less the capability allowed to management to work on certain means to get them.
- Management should consider that the less tangible purposes are attained when the more tangible ones getting attained. The first is actually attained by getting latter attained.

- Management should accordingly consider that, it does not achieve or accomplish intangible nor even tangible goals, it maximum getting objectives attained, by allowing the suitable circumstances to this.
- Management should consider that when it works on the means, it doesn't given any guarantee for getting the objectives. The failure to attain objectives or deviating so far from them is a probability to expect.
- Management is not achieving objectives, it is allowing the circumstances for the objectives to be achieved; it is preferable to direct managers to consider attaining objectives rather than achieving them. This will give much more opportunity for management self-tolerance and also a room of avoidance to the frustrating consequences of failure.

▪ **Testing the hypothesis (2/14)**

The null sub-hypothesis (2/14) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "**changeable versus changing environment**" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (19) Relationship between the dependent v. (B) and the independent v. (C14)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c14.1	530.22	0.00	415.78	0.00	174.23	0.00	3263.55	0.00	0.94	57.13	0.00	0.97	0.95
B&c14.2	660.90	0.00	420.87	0.00	179.97	0.00	8171.66	0.00	0.98	90.40	0.00	0.99	0.98
B&c14.3	457.83	0.00	390.61	0.00	170.28	0.00	2272.05	0.00	0.87	47.67	0.00	0.96	0.93
B&c14.4	539.89	0.00	398.30	0.00	175.54	0.00	3799.44	0.00	1.00	61.64	0.00	0.98	0.95
B&c14.5	585.26	0.00	396.45	0.00	175.16	0.00	3625.25	0.00	0.96	60.21	0.00	0.98	0.95

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of $(Ch)^2$ according to both person and likelihood were (457.83) and (390.61) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (19).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (2272.05) and (47.67) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear $(Ch)^2$ was (170.28) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.87) and (+1.00). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and $(R)^2$ were (+0.96) and (0.93) respectively. Those were positive and > (0.95) in the case of (R), while they were far > (0.50) in the case of $(R)^2$. All these values could be shown above in detail by the same Table (19).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortlessly awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- o Management should consider that organizations while working through an internal environment they used to work within many

larger external ones as well, there are too many relatively changing variables included in each.

- Management should consider that the variables included in the organization internal environment such as; managers, employees as human resource, materials and work climate, are relatively less changing, while they are relatively more changeable, the reason to this could return to the existence of management as a powerfully governing factor inside the organization.
- Management should consider that the variables included in the organization direct external environment - these are collectively known as stakeholders such as; owners, customers, employees, creditors, suppliers, competitors, and even managers and employees as beneficiaries - are more or less relatively moderate changing and changeable. The reason to this could return to the existence of management as an unavoidably influencing factor concerning organization-stakeholder relations.
- Management should consider that the variables included in the organization external indirect environment - these are collectively known as super systems such as; political, economic, technology, demographic, population, culture, social, legal, and natural factors - are relatively more changing, while they are relatively less changeable, the reason to this could return to absence or non existence of management as a powerfully governing factor outside the organization.
- Management should consider that organizations have no way but to adapt with their external environment, they should hardly work all the time as much as they can to subject the willingly changeable internal environment variables to the unwillingly changing external environment variables, otherwise they will be moving in hurry to decline.

▪ **Testing the hypothesis (2/15)**

The null sub-hypothesis (2/15) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "**first versus last condition in management**" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (20) Relationship between the dependent v. (B) and the independent v. (C15)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c15.1	504.78	0.00	377.10	0.00	172.52	0.00	2749.01	0.00	0.91	52.43	0.00	0.97	0.94
B&c15.2	471.38	0.00	344.07	0.00	169.93	0.00	2210.06	0.00	1.03	47.01	0.00	0.96	0.92
B&c15.3	650.73	0.00	406.57	0.00	178.00	0.00	5426.34	0.00	0.98	73.66	0.00	0.98	0.97
B&c15.4	504.63	0.00	406.70	0.00	176.20	0.00	4132.89	0.00	0.92	64.29	0.00	0.98	0.96
B&c15.5	496.77	0.00	391.44	0.00	171.13	0.00	2433.25	0.00	0.91	49.33	0.00	0.96	0.93

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (471.38) and (344.07) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (20).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (2210.06) and (47.01) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (169.93) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.91) and (+1.03). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.96) and (0.92) respectively. Those were

positive and $> (+0.95)$ in the case of (R), while they were far $> (0.50)$ in the case of (R) ². All these values could be shown above in detail by the same Table (20).

Statistical verification to this relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortlessly awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that the factors governing the success could be conditionally ordered in terms of the "in-to-out" responsibility concerning such a success.
 - Management should consider that the "in-to-out" conditional arrangement of its success governing factors could be key-word shown as; trying, exploiting resources, managerial functions, organizational activities, targeted objectives, and environmental variables.
 - Management should consider that according to this perspective trying will be the most independent condition affecting the managers' success. Trying is the hub of the management process.
 - Management should consider that success is mainly an internal responsibility of managers, that's why they have to try and keep trying to reach the success or in other words the satisfaction of organization's environment.
- **Testing the hypothesis (2/16)**

The null sub-hypothesis (2/16) that was based upon the non-existence of statistically indicative significant relationship between on the one hand, the lack of governmental hospital top managers' adoption to the academically right concept of management, and on the other hand, their need for epistemologically considering the conceptual issue of "**Last versus first condition in management**" has been rejected. On contrary the oppositely alternative one that was based upon the existence of such a relationship has been accepted. The verification of the latter was statistically justified according to two phases.

Table (21) Relationship between the dependent v. (B) and the independent v. (C16)

No. of var.	Testifying the relationship						Testifying its denotation						
	Pearson (Chi) ²		Likelihood Ratio (Chi) ²		Linear by Linear (Chi) ²		Type, direction, form and degree						
	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. value	Sig. (P)	Cal. (F)	Sig. (P)	Reg. Co. (β)	Cal. (T)	Sig. (P)	R Co.	Co. R ²
B&c16.1	544.19	0.00	390.26	0.00	174.00	0.00	3183.53	0.00	0.97	56.42	0.00	0.97	0.95
B&c16.2	510.05	0.00	396.62	0.00	176.00	0.00	4024.33	0.00	0.93	63.44	0.00	0.98	0.96
B&c16.3	488.00	0.00	359.88	0.00	170.97	0.00	2401.32	0.00	1.03	49.00	0.00	0.96	0.93
B&c16.4	521.09	0.00	368.00	0.00	169.36	0.00	2116.53	0.00	0.97	46.01	0.00	0.96	0.92
B&c16.5	439.78	0.00	283.26	0.00	154.77	0.00	968.80	0.00	0.91	31.13	0.00	0.92	0.84

Source: Based upon empirical study

At the level of **significance**, whereas the results could be generalized on the whole research population, this relationship has significantly been established. As the minimum calculated value of (Ch)² according to both person and likelihood were (439.78) and (283.26) > the equivalent tabulated ones those were (26.3) and (32.00), at level of sig. (0.05) and (0.01) respectively, and df equal to (16). The sig. or (p) value was approximately (0.00) in all the times, this is shown by Table (21).

At the level of **denotation**, this relationship has been confirmed as statistically indicative one as well. In terms of the **type**, it represents sort of causality, since the lowest values of both the calculated (F) and (T) were (968.80) and (31.13) in order > their parallel tabulated values, which were for (F) and (T) equal to (3.92) and (1.98) in order, at the levels of sig. (0.05), with a df (1,183) and (184) respectively. The highest sig. or (p) of both (F) and (T) was approximately (0.00) in all cases. Moreover, this relationship concerning the **form** was linear. Since the lowest value of linear by linear (Ch)² was (154.77) > its tabulated one that's mentioned above as (26.3) and (32.00) at the same levels of sig. (0.05) and (0.01) respectively, with a df equal to (16) while sig. or (p) was approximately (0.00). The **direction** of this relationship has been proved to show a directly proportional one, the values of the regression coefficient or (β), those previously confirmed by the significance of both F-ratio and T-test, were positive-signal ones and ranging between (+0.91) and (+1.03). Regarding the **strength**, it was strong in terms of the direction and form, since the lowest values of both (R) and (R)² were (+0.92) and (0.84) respectively. Those were

positive and $> (+0.90)$ in the case of (R), while they were far $> (0.50)$ in the case of (R) ². All these values could be shown above in detail by the same Table (21).

Statistical verification to the above tackled relationship could be interpretatively shown by taking into account that there is an urgent need for easily explaining and communicating the issue of "trying versus repeating" to the governmental hospitals' top-managers - as an example of management practitioners who are originally non-specialist in the field of management - so as to create their effortlessly awareness and consideration to such an issue. This could be occurred through utilizing an epistemologically-based approach as follows:

- Management should consider that the factors governing the success could be conditionally ordered in terms of the "out-to-in" responsibility concerning such a success.
- Management should consider that the "out-to-in" conditional arrangement of its success governing factors could be key-word shown as; environmental variables, targeted objectives, organizational activities, managerial functions, exploiting resources, and trying.
- Management should consider that according to this perspective environment will be the most independent condition affecting the managers' success. Environment is the hub of the management focus.
- Management should consider that success is mainly an external responsibility of managers, that's why they have to keep eye on their organizations environment to reach the success or in other words to be even able to try.
- Management should consider that environment is the strategic condition that may allow the foundation, success, and continuity of organizations.

Taken into account the "in-to-out" and "out-to-in" perspectives, one can horizontally consider that organizational success is based upon two interrelated pillars one is the performance or managerial trying and the other is the role or environmental expectations. Those two conditions of success are in turn a function in considering vertically all the aspects of management concept as extendedly shown, in Figure (2). In other words, the management concept could be more practically indicative whether it is epistemologically explained to show the significance of its core aspects.

In that case management could meaningfully expressed as “ **Trying** rather than repeating to exploit human and nonhuman **resources** that are feasible rather than available to organization as **formal rather than informal cooperation**, according to the highest level of efficiency rather than optimality, through practicing certain sort of **functions** - that are technically top-categorized as planning organizing directing and controlling, while behaviorally considered as endless ones - in certain fields of **activity** - that are originally known as marketing, producing, financing, supplying, and managing the human resource affaires, while they may apparently considered as derivatively diversified in reality, based upon the organizational philosophy and/or the very varied nature of the fields of activity that are practiced by organizations - so as to rather than to get the **objectives** attained rather than achieved according to the highest degree of effectiveness rather than success within the context of internally changeable while externally changing **environment** that conditionally allows or doesn't allow the existence, work, and even the continuity of the organization.

Results and recommendations:

- **Results:**
 - The academically right concept of management is insufficiently adopted by the non-specialist practitioners of management.
 - The non-specialist practitioners of management are insufficiently adopting the academic concept of management due to the hardness faced by them to get understanding it.
 - The difficulty faced by the non-specialist practitioners of management in considering such a right concept is due to the very specifically specialized way used by the management field-authors in presenting it.
 - The very specifically specialized way used by the field-authors in presenting the concept of management is actually occurred because of the lack of using the other supporting fields of knowledge, which are coping with the backgrounds of those who are non-specialist practitioners of management, for flexibly facilitating the communication of this concept.
 - The lack of flexibility in facilitating the communication of this concept within the context of other broader disciplines of

knowledge is return back to the delay in employing epistemology for simply presenting it.

- The delay in employing epistemology for simply presenting the management concept is most probably return to the less recognition and may be underestimation by the management specialists and authors to the value that could be added through utilizing this field - which is generally tackling the knowledge philosophy and criticism - in more easily providing the knowledge and/or concept of management.

- **Recommendations:**

- Turning the management authors' attention to the necessity of seriously considering that management is not only practiced in particular by the specialist managers who have had a managerial study or background before practicing, but also it is widely practiced by those who are not specialists.
- Turning the management authors' attention to the inevitability of reconsidering the concept of management, to be easily perceived and understood out of the management field-specialists zone.
- Turning the management authors' attention to the urgent need for employing epistemology to extend the **knowledge-basis** of the management concept. So as to get more and more extensive zones of management non-specialist practitioners capable of correctly perceiving and consequently adopting such a concept.
- Turning management non-specialist practitioners' attention to the importance of organizationally establishing an advisory unit or at least a permanent committee that includes a balanced number of specialists in both management and epistemology. Just for getting the management knowledge precisely right by the former while getting it suitably easier by the latter.
- Turning management trainers and consultants' attention for significantly utilizing the epistemologists' assistance in easily communicating the management concepts while providing their services to those organizations administered by management non-specialist practitioners.

Future research-relevant topics:

- Enlarging the managers' horizon: an epistemological approach.
- Using epistemologically in creating Meta aspects for managerial leadership.
- Reconsidering epistemologically the organizations' incentive systems.
- Getting managers perceive epistemology to facilitate the communication process.
- Directing by epistemology the management of interpersonal relationships.

References:

- Adams, G and Schvaneveldt, J. (1991). *Understanding Research Methods*, 2nd ed., Longman, New York.
- Andersen, T.J. (2000). Strategic planning, autonomous actions and corporate performance. *Long Range Planning*, 33/2, pp.184-200.
- Bonjour, L. (2002). *Epistemology: Classic Problems and Contemporary Responses*, Rowman & Littlefield, Lanham, MD.
- Booth, S. A. (1993). *Crisis Management strategy: Competition and change in modern enterprises*. Rutledge, London.
- Boufoy-Bastick, Z. (2005). "Introducing 'Applicable Knowledge' as a Challenge to the Attainment of Absolute Knowledge". *Sophia Journal of Philosophy* 8: 39–51.
- Bovens, L. & Hartmann, S. (2003). *Bayesian Epistemology*. Oxford University Press, Oxford.
- Chandler, A. D. (1978). *The Visible Hand: the Managerial Revolution in American Business*, Belknap, Harvard University Press, Cambridge.
- Checkland, P.B. (1999). *Systems Thinking, Systems Practice, with Soft Systems Methodology: a 30 year retrospective*, Wiley, Chichester.
- Checkland, P.B. and Casar, A.(1986). Vicker's Concept of an Appreciative System Account, *journal of applied systems analysis* 13, pp.3-17.

- Cook, T.D. and Campbell, D.T. (1990). *Quasi-Experimentation: Design and Analysis Issues for field setting*, Houghton-Mifflin, Boston.
- Culp, G., Smith, A. and Abbot J. (1994). Implementing TQM in Consulting Engineering Firms. *Journal of Management in Engineering* 9, pp.340-56
- Dancy, J. (1991). *An Introduction to Contemporary Epistemology*, 2nded, John Wiley & Sons, NY.
- De Kluyver, C.A. (2000), *Strategic Thinking: an Executive Perspective*, Prentice Hall, NJ.
- Dettmer, H.W. (2003). *Strategic Navigation: A Systems Approach to Business Strategy*, Quality Press, Milwaukee, WI.
- Dessler, G. (1999). *Essentials of Human Resource Management*, Prentice Hall, New Jersey.
- Drucker, P.F. (1946). *The Concept of the Corporation*, John Day and Co., New York.
- Duncan, W.J. (1989). *Great Ideas in Management*, Jossey-Bass, San Francisco, CA.
- Easterby-Smith, M., Thorpe, R. and Lowe, A. (1991). *Management Research: an Introduction*, Sage, London.
- George, C.S. (1972). *The History of Management Thought*, Prentice-Hall, Englewood Cliffs, NJ.
- Glaser, B. G. and Strauss, A. L. (1967). *The discovery of grounded theory*, Aldine, Chicago.
- Greco, J. & Sosa, E. (1999). *Blackwell Guide to Epistemology*, Blackwell Publishing, Oxford.
- Greenwood, R.G. (1981). Management by objectives: as developed by Peter Drucker assisted by Harold Smiddy, *Academy of Management Review*, 6/2, pp. 225-30.
- Hakim, C. (1987). *Research Design: Strategies and Choices in the Design of Social Research*, Allen and Unwin, London.
- Hatch, M.J. (1997). *Organization Theory: Modern Symbolic and Post Modern Perspectives*, Oxford University Press, New York.
- Hay, C. (2008). *The Theory of Knowledge: a Course book*, The Lutterworth Press, Cambridge.
- Howell, C. (1995). Toward a History of Management Thought, *Business and Economic History* 24/1, pp. 41-50.

-
- Hussey, J. and Hussey, R. (1997). *Business Research: a Practical Guide for Understanding and Postgraduate Student*, Macmillan Business, Basingstoke.
 - Jacoby, S.M., (2004). *Employing Bureaucracy: Managers, Unions and the Transformation of Work in the 20th century*, Lawrence Erlbaum, Mahwah, NJ.
 - John, S. & Peter, A. (2002). *A guide to corporate survival and growth*, Business International Corporation, New York.
 - Kaplan, A. (1979). *The conduct of inquiry: Methodology for behavioral sciences*, Harper & Row, New York.
 - Kast, F. and Rosenzweig, J. (1972). General Systems Theory: Applications for Organizations and Management, *Academy of Management Journal* 15, pp. 447-65.
 - Katz, D. (1966). *Research methods in the behavioral science*, Holt, Rinehart and Winston, New York.
 - Kerlinger, R.N. (1986). *Foundations of behavioral research* 3rd ed., Holt, Rinehart and Winston, New York.
 - Kiessling, T.S. & Richey, R.G. (2007). Examining the Theoretical Inspirations of a Management Guru Peter F. Drucker, *Management Decision*, 42/10, pp. 1269-1283.
 - Kirk, R. E. (1982). *Experimental design: procedures for the behavioral sciences*, Brooks/Cole, Belmont.
 - Klein D.J. & Debruine, M. (1995). A Thinking Process for Establishing Management policies, *Review of Business*, 16/3, p.37.
 - Lagadec, P. (1993). *Preventing Chaos in Crisis: strategies for preventing, control and damage limitation*, McGraw-Hill, London.
 - Leavitt, H.J. (1989). *Corporate Pathfinders: building vision and values into organization*, Penguin, New York.
 - Lewis, D. (1996). Elusive Knowledge, *Australian Journal of Philosophy* 74, pp. 549-67.
 - Locke, E. (1982). The Ideas of Fredrick W. Taylor: An Evaluation, *Academy of Management Review* 7, pp14-24.
 - Luthans, F. and Stewart, T. (1977). A general Contingency Theory of Management, *Academy of Management Review* 2/2, pp.181-95.
 - Mabey, C. and Finch-lees, T. (2008). *Management and leadership Development*, Sage, London.
 - MacRae, D.G. (1974). *Weber*, Fontana, London.

- Martinez, C.L., (2001), *Modern Management Thought and Theories: Evidence from the Evolution of Colombian Corporation*, Universidad Eafit, Colombia.
- Marquardt, M., (1996). *Building the Learning Organization*, McGraw-Hill, New York.
- Mayer, J.P. (1943). *Max Weber and German Politics*, Faber & Faber, London
- Mickelwait, J. & Wooldridge, A. (1996). Drucker the guru's guru, *The McKinsey Quarterly* 3, pp. 144-59.
- Mitroff, A. and Pearson, C. (1993). *Crisis management, A diagnostic guide for improving your organization's crisis preparedness*, Jossey-Bass publishers, San Francisco.
- Mitroff, A., Pearson, C. and Harrington, L.C. (1996). *The essential guide to managing crises*, Oxford University Press, Oxford
- Mockler, R. (1968). The Systems Approach to Business Organization and Decision Making, *California Management Review* 11/2, 53-58.
- Mole, G. (2000). *Managing Management Development*, Open University Press, Milton Keynes.
- Noda, T. and Bower, J.L. (1996). Strategy making as iterated process of resource allocation, *Strategic Management Journal* 17, pp.159-92.
- O'Connor, E. (1999). The Politics of Management Thought: A Case Study of the Harvard Business School and the Human Relations School, *Academy of Management Review* 24, pp. 117-131.
- Racherla, P. and HU, C. (2009). A framework for knowledge-based crisis management, *Cornell Hospitality Quarterly* 50/4, pp. 561-577.
- Reld, D. (1995). Fayol: From Experience to theory, *Journal of Management History* 3, pp21-36.
- Remenyi, D., William, B., Money, A. and Swartz, E. (1998). *Doing Research in business and Management: an Introduction to Process and Method*, Sage, London.
- Santos, A., Powell, J.A. & Sarshar, M. (2002). Evolution of management theory: the case of production management, *Management Decision*, 40/8, pp. 788-796.
- Sekaran, U. (1983). Methodical and theoretical issues and advancements in cross-cultural research, *Journal of International Business*, pp.60-78.

- Smith H. (1975). *Strategies of Social Research: the Methodological Imagination*, Prentice-Hall, Englewood Cliffs, NJ.
- Smith, J. (1998). The Enduring Legacy of Elton Mayo, *Human Relations* 51, pp. 221-249.
- Stiles, P. (2001). The impact of the board on strategy: an empirical examination, *Strategic Management Journal* 38/5, pp.627-50.
- Swanson, G., & Oates, R. (1989) enlightened management, MIU Press, Fairfield, AI.
- Taylor, F.W. (1911). *Principles of Scientific Management*, Harper & Brothers, New York.
- Tomberlin, J. (1999). *Philosophical Perspectives 13, Epistemology*, Blackwell Publishing.
- Turengul, M. (2007). The Philosophical Foundations of Management Thought, *Research Journal of Social Sciences* 2, pp.33-37.
- Wang, Q. (1995). The Designing and Restructuring of Organization and the New Revolution of Organization and Development, *Systems Engineering Theory, Methodology, and Applications* 4/2.
- Watson K.J., Blackstone, J.H. & Gardiner, S.C. (2007). The Evolution of Management Philosophy: A Theory of Constraints, *Journal of Operation Management*, 25 pp. 387-402.
- Watson, T.J. (1995). Entrepreneurship and Professional Management: A fatal Distinction, *International Small Business Journal*, 13/2.
- Weathersby, G. (1999). Managers may never be the same, *Management Review*, February 5.
- Wrege, C.D. and Greenwood, R.G. (1991). *Fredric W. Taylor: The Father of Scientific Management*, R. D. Irwin, Inc., Homewood.
- Wrege, C.D. and Hodgetts, R.M. (2000). Fredric W. Taylor's 1989 pig iron observations: Examining fact, fiction, and lessons for the new millennium, *Academy of Management Journal* 43, pp.1283-91.
- Wren, D.A. (2001). H. Fayol as strategist, *Management Decision* 39, 475-87.
- Wren, D. A. and Greenwood, R.G. (1998). *Management Innovators: The people and Ideas that Have Shaped Modern Business*, Oxford University Press, New York.

- Wren, D.A. (2005). *The history of management thought*, 5th ed., Wiley, Hoboken, N.J.
- Wren, D.A. (2009). *The Evolution of Management Thought*, 6th ed., John Wiley & Sons, Inc., New York.
- Wren, D.A. & Bedeian A.C. (1994). *The Evolution of Management Thought*, 4th ed., John Wiley & Sons, Inc., New York.

Further readings

- Annis, D. (1978). "A Contextualist Theory of Epistemic Justification". *American Philosophical Quarterly* 15, pp. 213–219.
- Armstrong, D.M. (1973). *Belief, Truth, and Knowledge*, Cambridge University press, Cambridge.
- Blanshard, B. (1939). *The Nature of Thought*, George Allen & Unwin, London.
- Cohen, Stewart (1998). "Contextualist Solutions to Epistemological Problems: Skepticism, Gettier, and the Lottery". *Australasian Journal of Philosophy* 76, pp. 289–306.
- Davidson, D. (1986). *A Coherence Theory: Truth and Interpretation Perspectives on Philosophy*, Blackwell, Oxford.
- Goldman, A.H. (1976). Philosophy and Phenomenological Research, *International Phenomenological Society* 37/2, pp.147-164.
- Haack, S. (1993). *Evidence and Inquiry: towards Reconstruction in Epistemology*, Blackwell, Oxford.
- Harris, E. E. (2002). *Hypothesis And Perception*, George Allen and Unwin, London, Rutledge, London.
- Hawthorne, J. (2005). "The Case for Closure", *Contemporary Debates in Epistemology*, Peter Sosa and Matthias Steup (ed.): 26–43.
- Hempel, C. (1935). On the Logical Positivists' theory of truth, *Analysis* 2, pp. 49-59.
- Hendricks, V. F. (2006). *Mainstream and Formal Epistemology*, Cambridge University Press, New York.
- McGinn, C. (2002). The Truth about Truth, in *What is Truth?*, Richard Schantz, Walter de Gruyter, Berlin.
- Morton, A. (2002). *A Guide through the Theory of Knowledge*, 3rd ed., Blackwell Publishing, Oxford.

- Niiniluoto, I. (2002). *Critical Scientific Realism*, Oxford University Press, Oxford.
- Pollock, J.L. (1975). *Knowledge and Justification*, Princeton University Press, Princeton, New Jersey.
- Popper, K.R. (1972). *Objective Knowledge: An Evolutionary Approach*, Oxford University Press, Oxford.
- Rand, A. (1979). *Introduction to Objectivist Epistemology*, Meridian, New York.
- Steup, M. (2005). Knowledge and Skepticism, *Contemporary Debates in Epistemology*, Sosa and Matthias (eds.), 1-13.
- Thagard, P. (2007). Coherence, Truth and the Development of scientific knowledge, *Philosophy of Science* 74, pp. 26-47
- Young, J. O. (1995). Global Anti-realism, *Journal of Philosophy Research* 26, pp.89-101.