



## **Deducing The Intellectual Pattern Existing In Schools Based on The Formal Model**

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ARTICLE  
INFO  
Article history:

**Received:**  
08/05/2022

**Accepted:**  
12/12/2022

Available  
online:  
Autumn 2022

**Keyword:**  
Intellectual  
Pattern, Schools,  
Formal Model,  
Ontology,  
Methodology,  
Epistemology.

### **Abstract**

This article mainly deduces the intellectual pattern existing in schools based on the formal model. Because schools in different educational systems are also created based on a specific intellectual basis. The documentary method is used to extract the intellectual basis of formal model schools by referring to the texts and sources in the history of management which are often published in the form of books and articles in reputable magazines. In order to obtain comprehensive information until theoretical saturation, about 24 documents were examined and analyzed from the texts in order to achieve the goals of the research. Positivist was deduced as its underlying thought pattern based on analyzing information from the common points of the this model with classical management. Finally, the positivisms intellectual pattern has been analyzed regarding ontology, epistemology, and methodology. The research findings showed that in the ontology of positivists, humans create and label the relationships of external objects in the mental structure they already have and are not related to the external world itself. In addition, the positivist approach intends to use the quantitative and experimental methods in humanities studies as in natural sciences for credibility. Finally, specific positivist rationality believes that knowledge is accompanied by experience.

Karimi, F., Yarmohammadzadeh, P., Hosseinzadeh, O.A., & Jamalpour, M. (2022). Deducing The Intellectual Pattern Existing In Schools Based On The Formal Model, *Journal of School Administration*, 10(3), 1-25.

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## **Introduction**

Human beings naturally pay attention to the existence and find various perceptions in the existence of reality. (Khosrowshahi, 2012, p. 14). Humans should prove their true face with a convincing method to understand the true perception of existence (Chalmers, 2015, p.72). In human sciences, the theory is used to express the relationships between phenomena, so the theory attempts to explain a part of the human experience from this world by using an intellectual structure. On the other hand, it connects the phenomena and clarifies the causal relationship to reach those phenomena' effects in the form of an explanation (Arthur Burt, 1995, p.14). Therefore, the theory is a part of the thoughts and ideas of researchers, scientists, and experienced executives, which provides a certain intellectual platform for recognizing and describing phenomena as accurately as possible. This process starts from facts in their hierarchical form and becomes structures and propositions after being transformed into concepts (Jasbi, 2017). It should be noted that the correct understanding of theories depends on their intellectual presuppositions of knowledge (Iman, 2020, p.312). In addition to common features with other official organizations, education has its own characteristics that require special conditions and abilities to manage (Abbaspour, Akbari, Zirak, Momeni Mahmoudi, 2020). In addition, schools use theories in related fields to

complete educational tasks which take a special form with the bias of a specific thought pattern (Sokas, Knudsen, 2017, p. 21). Therefore, schools in such systems have the same characteristics. Three presuppositions exist in every thought pattern: 1. Ontology, 2. Methodology 3. Epistemology (Ebrahimzadeh, 2018).

More importantly, a group of theories becomes a model when they have many points in common. One of the schools models is the formal model proposed in Tony Bush's findings (Bush, 2020, p. 70).

Theories in schools have emerged based on certain worldviews. Therefore, people think like each other by taking advantage of the same intellectual capital and strengthening the presuppositions in their theories within themselves with their training (Morgan, 2016, p. 41). Therefore, their origin and intellectual origin should be evaluated from an epistemological point of view to find the intellectual pattern of the theories (Mirzaei Ahranjani, Sarlak, 2005, p. 69).

Schools in based on the formal model have the following characteristics:

In formal model, school principals cannot determine the goals, because the goals are formulated at the national level (Lovasis, 1999, p. 6-25). The educational system has formal goals that are followed by the members of the organization. In school and high school, different parts are systematically connected with each other and with the

organization itself. In these models, they do not explain many informal, intra-school and high-school communication, but the organizational chart emphasizes the vertical relationships of employees. Employees of high schools and colleges are accountable to the head of the department, who in turn are accountable to the principal and the head. Due to their official duties in schools and colleges, administrators have authority over other employees and their power depends on their position or position. Therefore, structural assumptions include goal orientation, rationality, exercise of discretion, the main features of formal models. The formal model assumes that managerial decisions are made through a rational process. This model is often proposed in terms of organizational levels. The five main levels are: 1- The central level, which includes the national, provincial, and state governments, as well as the official board appointed by them, which is jointly responsible for overall planning, resource allocation, and monitoring of standards. 2- The local level, which includes local and regional authorities and is responsible for interpreting government policies and managing the education system. 3- Institutions and institutions - schools, universities and high schools and other educational organizations. 4- Sub-units such as groups or faculties in universities and high schools and departments and units in schools. 5- The level of people, such

as teachers, students, and support staff. This model is superior to other models in its accuracy, stability, strictness, discipline and reliability. In educational institutions, teachers are accountable to the principal and principal. In colleges or schools where goals are broadly set by the principal or department head and agreed upon by employees without question. In educational organizations and high schools and colleges, the division of labor is quite clear. This division of work is based on the teaching of special courses that are defined in the curriculum. Schools have rules and regulations for student behavior, and teacher behavior is guided through bureaucratic tools such as staff handbooks. These rules also apply to the main subjects of teaching and learning. Schools and colleges share many of the characteristics of the bureaucratic model, including a hierarchical structure with a principal at the top. There may be teachers based on their expertise in high school and high school and in elementary schools. Schools have many rules for students and staff. Their working lives are dictated by the tyranny of working hours. Managers are accountable to the governing body for the activities of schools and colleges (Bush, 2020, pp. 77-120).

Past research shows that the formal model is observed in most of the world's schools in the past or present (Pech, Serben Pitek, Somtiken, 2015). Therefore, it is necessary to address the intellectual pattern of schools based on

the formal model. The current research seeks to answer the questions, 1. what is the ontology in the intellectual pattern of schools based on the formal model? 2. What is the intended methodology of the intellectual pattern in schools based on the formal model? 3. What is the intended epistemology of the intellectual pattern in schools based on the formal model?

### **Theoretical foundations and research background**

An intellectual pattern is an intellectual framework with well-reasoned and general self-evident principles and rules that guide scientists' theoretical foundations and scientific activity with certain epistemological methods (Hosni and Alipour, 2011). Like other human beings, scientists do not exempt from fundamental assumptions in formulating their theories and consider phenomena in a new way through these thought patterns (Lazi, 2017). These presuppositions are manifested in the three parts of ontology, epistemology, and methodology. 1- Ontology: the nature of reality (how to understand the world). 2- Epistemology: how to know the existence and the relationship between the researcher and existence. 3- Methodology: (how to gather information from existence) (Danai fard 2007).

The intellectual pattern has different headings, such as frameworks of thought, frames of reference, high-level background theories, or theory-laden observations, universes of discourse,

language games, exemplars, and paradigms, and terms such as course and school are used in philosophy, jurisprudence, and principles (Hassni and Alipour, 2006).

In the educational system, subjects are considered based on the theorists' point of view using theories. Finding general explanations of natural events is the main goal of science. These general explanations are theories (Sadeghpour, Moghads, 1998, p. 28). At the end of the 19th century, new criteria moved towards discovering the laws of the real world based on the observable characteristics of phenomena (Boyan, 1998, p. 209). According to the underlying thought patterns, Maxi categorizes the evolution and development of theorizing in educational management as follows: classical or romantic period (1850-1900); Scientific management (1900-1920); human relations (1920-1930); Logical empiricism in science and social sciences (1920) until now; theory movement (1940-1970); Radical reforms in social sciences and theorizing in educational management (1950) until now; Hermeneutics, phenomenology, critical theory and research in educational and social sciences (1980) until now; Pragmatism in social sciences and theorizing in educational management (1970) until now; and current orientations in theorizing in educational management and social sciences (Maxi, 2005).

Tony Bush classifies schools into six main models. These models are: formal,

collegial, political, subjective, ambiguous, and cultural (Bush, 2020, p. 70). The formal model emphasizes the organization's accountability to its supporters. The primary feature of this model exists more or less and with different degrees in each theory, known as the formal model. These models are 1- Structural models, 2- Systemic models, 3- Bureaucratic models, 4- Rational models 5- Hierarchical models. Different theories have a significant overlap with each other, and their main elements are the same, although they have different titles. Although theories emphasize different things, their main elements are the same (Bush, 2020, pp. 77-120).

There is a quantitative study on Bush's management models, including Sykes's study entitled "Educational Management Models in Educational Institutions" in Southeast Asian countries. The result showed that the formal model is the dominant and standard model in these countries among Tony Bush's models (Sykes, 2015). The formal educational management model has also been experimentally implemented in England's educational system (Bush, 2020, p. 82). In addition, Patch et al. studied the development of the dual management model of schools in Cambodia. They showed that formal and cultural models are the most popular in Cambodian schools (Patch, Serben Pitek, Somtiken, 2015).

Many schools prefer the formal model, such as the Czechoslovak

Republic (Svecova, 2000), China (Bush et al., 1998), Greece (Kavouri and Ellis, 1998), the Netherlands (Klus-Stanska and Olek, 1998), and South Africa (Sebakwane, 1997) and Slovakia (Becaj, 1994) and most South American countries (Newland, 1995). The Greeks also tend to formalism the education system (Caveri and Ellis, 1998, p. 106). The formal model is accompanied by monitoring in many countries to coordinate schools with the national curriculum. Many countries implement forms of external supervision as school inspections, to support and monitor education and obtain expected standards (McNab, 2004, p. 53). Fishman (1999) compared Russian and western education and concluded that school leaders could not set goals in centralized schools because the plans are formulated at the national level. Hall (1977) states that in such systems, the office doors are named with the jobs instead of responsible names, indicating the organization's formal structure. In South Africa, teachers were dominated by rigid bureaucratic regulations, especially in the school curriculum. In Greece, bureaucracy is controlled by textbooks (Bush, 2020, p. 89). In such systems, managers' behavior with organizational members is rational, and their power and influence are often hierarchical (Leithwood et al., 1999, p. 14).

Schools based on the formal model have not been subjected to meta-theoretical analysis, but a few related researches are as follows. Eisner

mentioned in a study titled "The Kind of Schools We Need": In today's schools, only reading, writing and arithmetic skills are emphasized; While the value of schools is in educating people with high Intellectual pattern. Bartlett has proven in her research that the human tendency to interpret information reinforces the need for thinking style training (Quoted by Shabani, 2012). Richardson & Ice (2010) in the research "examining the level of critical thinking of students in online discussions" came to the point that different educational strategies can affect different parts of thinking education. From Fleck's point of view, every scientific reality is a product of the collective thinking of a society that has reached unity in an "intellectual model", so every scientific reality is a social reality (Johnson and Doberly, 2000, p. 76).

Hajipour and Abul Qasimi (2000) investigated and compared the management of secondary schools in Kerman based on Tony Bush's management models. They found a significant difference between the types of management based on Bush's models. The Collegial model has the highest priority, and the cultural, formal, political, subjective, and ambiguity models are the following priorities.

Zare et al. (2019) studied identifying and describing the dominant leadership model and its characteristics in secondary schools of Birjand. Based on Tony Bush's classification, they have

focused on identifying the dominant leadership model in secondary schools. Based on the results of quantitative data analysis in the first stage, they had the highest average of the dominant leadership model (interpersonal leadership). Then, the ethical leadership model, contingent leadership model, and managerial leadership model (formal model) were placed in the following ranks. Based on the obtained results in the second stage, playing a managerial role (formal model), supporting students and teachers, the personality of the manager, respect for others, concern for improving education, and seeking participation are among the essential features of the dominant leadership model in the studied schools (Zare, Hossein Qolizadeh, Mehram, 2019, pp. 368-339).

### **Research method**

Extracting the characteristics of schools based on the formal model: In education management, models have been adapted from various fields and compiled to explain educational organizations' unique characteristics in exceptional cases. Therefore, it is necessary to examine and adjust the formal model to understand the existing models, which makes it possible to systematically explore the thoughts and beliefs in the model. Extracting the specific features of the formal model in order to adapt it to management outside education was done in the following way:

Step 1. Data review: including "writing the data sentence by sentence" and actively reading the data by searching for similarities and separating similar sentences. Step 2. Creation of initial codes: The codes were determined based on the similarity of the sentences, then they were matched with the data summaries that show the code. Step 3. Searching for themes: This step included categorizing different codes in the form of themes. Step 4. Revision of themes: A set of created themes was reviewed. Step 5. Preparation of the report: a set of well-understood themes were drawn in the form of a table.

**Table1 .A summary of classified characteristics of schools based on the formal model**

Row	The text of Tony Bush's book, 2020, pp. 116-77	An outstanding feature of the floors
1	<p>The goals are formulated by the heads and high formal of the organization, and the opinion of the teachers is not very important. Formal goals are formulated by national and local policies and by organizational-level policymakers.</p> <p>The goals and priorities of resource allocation should be based on the purposes and importance of the organization.</p> <p>Formal goals are accepted and followed by the members of the organization.</p> <p>How to set goals is a significant part of a leader's activities.</p> <p>Within the framework of the formal structure, decisions are made based on goals.</p> <p>The organization formulates policies to achieve its goals.</p> <p>Organizations are created in the first place to achieve specific goals.</p>	Development of formal goals by the top formal of the organization
2	<p>Members of organizations are part of the structure.</p> <p>Management decisions are made through a rational process.</p> <p>In the formal model, the organization's formal structure is fundamental.</p> <p>In the formal model of schools, The structure of the organization is objective.</p> <p>In formal models, the formal structure tends to be hierarchical.</p> <p>The structure of schools and universities is depicted as hierarchical and vertical relationships.</p> <p>Structures may be characterized by physical terms that mean stability and stability.</p> <p>The division of work is based on the expertise of the employees.</p> <p>It emphasizes the hierarchical authority and the formal chain of command between different hierarchical positions.</p> <p>Schools have rules and regulations for student behavior and teacher behavior.</p> <p>The bureaucracy model emphasizes the impersonal relationships between employees and clients.</p> <p>Its power and influence are based on hierarchy and formal positions.</p>	Formal structure with hierarchical relationships

3	<p>The authority of managers and leaders stems from their administrative position.</p> <p>Subordinates are expected to implement the decisions made by senior managers.</p> <p>Employees, in turn, are accountable to the manager and the boss.</p> <p>Some consider the manager to be the embodiment of the organization and act like him.</p> <p>The bureaucracy of the formal organization achieves maximum efficiency through rational management approaches.</p> <p>Management decisions are made through a rational process.</p> <p>In most centralized systems, school principals are accountable to local or national ministries of education.</p> <p>In schools, the manager is responsible for informing and informing the formal of each department and other employees.</p> <p>In the formal view, leaders' authority stems from their administrative position within the organization.</p> <p>Hierarchy allows leaders to supervise their employees.</p> <p>Leaders are responsible for the affairs and activities of the organization and subordinates in front of foreign organizations.</p> <p>Leaders and administrators have authority over other employees due to their formal duties in schools and colleges.</p>	<p>The legal authority of managers due to the formal position</p>
4	<p>Management decisions are made through a rational process in the following stages: problem diagnosis, information gathering, providing a solution (hypothesis), choosing the best option, and implementing and evaluating.</p> <p>Decisions are guided by rules and regulations, not by personal initiative.</p> <p>Creating a culture of inspection</p> <p>Diagnosing a problem, analyzing the problem, which includes gathering information, categorizing solutions with choices, choosing the best solution to the problem that will lead to the achievement of the organization's goals, implementing solutions, and monitoring and evaluating the effectiveness of the chosen strategy.</p> <p>Complex issues are referred to higher levels for resolution. He should solve problems most wisely.</p>	<p>Using the scientific method in examining organization issues</p>

Outstanding features are obtained by examining the formal model of schools, which are: 1- Development of formal goals by the top formal of the organization; 2- Formal structure with hierarchical relationships; 3- The legal authority of managers due to their formal position; 4- Using the scientific

method in examining organization issues.

Matching schools based on the formal model with theories outside of education: It is worth mentioning that the nature of educational management is derived from the principles of industrial management and is used in

the parameters of educational management (Boyan, 1998, pp. 209-237). Therefore, educational management uses industrial management principles in the field of study and practice. This field was established as a scientific field; consequently, its theorists and advocates began to develop alternative models based on empirical evidence from schools and higher education (Bush, 2020, p. 52). Therefore, government and industrial management sources were investigated to achieve the intellectual presuppositions of the formal model. The four key features of the formal model were also used as search keys in the documentary method to check the management resources. The implementing process of the current research did an exploratory review of the background of the study to explain the intellectual support of the formal educational management model.

The coding documentary method was used to adapt the thought pattern in schools based on the formal model. It includes: (according to Bazargan, 2016, p. 62). **1-** Key phrases were extracted from the formal model and placed as a guide for reviewing public management resources **2.** Similar features were organized into separate categories based on the obtained headings **3.** The elimination of duplicate categories and the merging of

smaller types into more significant categories and the classes of each main category with similar characteristics continued until saturation. The categories of codes were converted into four themes and their description in the research report. The chart below shows the summary characteristics of the schools based on the formal model and classification of the outstanding features.

This process was performed through carefully reading texts and sources in the history of management and influential intellectual currents as required documents, which are often published in the form of books and articles in prestigious journals.

About 24 documents were examined and analyzed to obtain comprehensive information about the texts to achieve the goals. We reached theoretical saturation in about 24 documents. Theoretical saturation is achieved when additional data do not help to complete and specify the theoretical category. The used information documents are:

1. Hannagan, T. (2005). *Management Concepts and Practice*.
2. Hare, D. (1996). *Theory development in educational administration*.
3. Maxcy, S. J. (2005). *Theory development in educational administration*.

4. McNamara, C. (2010). Historical and Contemporaries Theories of Management.
  5. Orlosky, Donald. E., Lloyd, E. McCleary., & Shapiro, Arthur. (1984). Educational administration today.
  6. Özdemir, M. (2011). Educational Administration: A Science at the Intersection of Public Administration and Business Administration.
  7. Weijrich, H., & Koontz, H. (1993). Management A Global Perspective.
  8. Witzel, M. (2003). Fifty key figures in management.
  9. Scott. Richard (2018). Organizations, rational natural systems.
  10. Iranjad Parisi, Mahdi, Sasan Gohar, Parviz. (2006). Organization and management: from theory to practice.
  11. Jasbi, Abdullah. (2017). Fundamentals and Principles of Management.
  12. Robbins, Stephen. (2006). Organization theory (structure, design, and applications).
  13. Rahman Sarasht, Hossein. (2015). Theories of organization and management
  14. Sokas, Heridimus. Knudsen, Christian. (2017). Organization theory: transtheoretical views.
  15. Shefritz JM and Steven Uteh J. (2017). Organization theories of myths.
  16. Tahmasabi, Reza. (2015). Organization theory.
  17. Qolipour, Arin. (2005). Institutions and organizations (institutional ecology of organizations).
  18. Kohn, Goel. (2017). Theories of organization and management.
  19. Maktabi, Seyed Habib; Jafari, Paryosh (2008). Essay on school management based on metacognition for primary school principals.
  20. Macaulay, John; Deberly, Joanie and Johnson, Phil. (2016). Organizational theory views and challenges
  21. Morgan, Garrett. (2016). The image of the organization (about the organization and its metaphors).
  22. Moselis, Nikos (2006). Organization and bureaucracy (an analysis of modern theories).
  23. Najaf Beigi, Reza. (2013). Organization and management.
  24. Hatch Mari Jo Danai Fard Hasan (2017). Theory of modern, symbolic-interpretive, and postmodern organization.
- The documentary method implementing steps are as follows: 1- exploratory investigation of the background based on key codes; 2- Accurate reading of texts and sources and reducing data; 3- Examining these resources (using the Table of contents, extracting files, placing the contents in categories); 4- Processing (re-

evaluation to ensure the consistency of the contents with the head of each class); 5- The report (summary) is the last stages of the work (Sadeghi Fasai, Irfan Menesh, 2015).

About 24 documents were examined and analyzed to obtain comprehensive information on the texts to achieve the goals. These review criteria are based on four characteristics from the formal model as the primary classes. Therefore, the key phrases extracted from the formal model were placed as a guide. As mentioned, these four characteristics are 1- The development of formal goals by the organization's top formal; 2- Formal structure with hierarchical relationships; 3- The legal authority of managers due to their formal position; 4- Using the scientific method in examining organization issues.

Similar words were collected from the list of management theory books and related articles from the internet search engine. The compatibility of the features of the formal model in schools with classical management theories was clarified by preliminary searches in the administrative theory in human organization construction and process (Kohen, 2017, Vol. 1, p. 147). The

Table of contents of the studied documents. Then, all the characteristics of the classical school<sup>4</sup> From the sources in which the classical school was fully described, were extracted through the documentary research method as the source of creating the formal model. Similar features were organized in classes based on the main points from the formal model and continued until saturation. The classical management school was adapted as a support for the formal model.

According to the compatibility of the characteristics of the classical school of management with the features of the formal model, three currents were investigated in the classical school. Three currents of the classical school complement each other and consider the organization a rational means of production (Kohen, 2017, p. 164). Fayol's view is associated with Weber's ideas about rationalization and technical efficiency, which is Taylorism inheritance (Hatch, 2016, p. 71). Scientific management emphasizes the physical analysis of work complemented by bureaucracy and common points of these three flows are stated in the Table below.

**Table2. Summary of the matching table of the formal model with classical management**

	A distinctive feature of the floors	Classic management feature
1	Development of formal goals by the top formal of the organization	<p>Activities are carried out based on a single goal and under the supervision of a boss (Iranjad Parisi, Sasan Gohar, 2006, p. 57).</p> <p>Organizations have tools and mechanical devices to help carry out targeted activities (Sokas and Knudsen, 2017, vol. 2, p. 36).</p> <p>The classical school assumes that organizations have goals and members strive to achieve them (Sadeghpour, Moghads, 1998, p. 28).</p> <p>The organization is aware of its central goal and the reason for its existence (Macauley, Deberly, Johnson, 2016, p. 132).</p> <p>The organization is a tool designed to achieve specific goals (Morgan, 2016, p. 23).</p> <p>The part of the organization that is responsible for setting goals is senior management (Macauley, Deberly, Johnson, 2016, p. 132).</p> <p>In addition to choosing goals, being rational also refers to achieving those goals (Scott, 1981, p. 57).</p>
2	Formal structure with hierarchical relationships	<p>"Classical school" was accompanied by an increasing emphasis on discipline and restraint in the use of resources (Macauley, Deberly, Johnson, 2015, p. 687).</p> <p>The three currents emphasize expertise, organization structure, hierarchy, and duty (Kohen, 2012, p. 162).</p> <p>Classical management theories focus on achieving maximum organizational efficiency (Scott, 1981, p. 57).</p> <p>The classics paid attention to the formal organization and considered the existence of an informal organization harmful (Sadeghpour, Moghadsis, 1998, p. 28).</p> <p>Classical views have included a purely mechanical approach to the organization and individuals (Sokas and Knudsen, 2017, vol. 2, p. 31).</p> <p>They considered man equal to other production elements and did not give him an independent identity (Robbins, 2016, p. 269).</p> <p>They built management principles with engineering methods to design scientific jobs (Iranjad Parisi, Sasan Gohar, 2016, p. 47).</p> <p>Finding effective and efficient methods in organizations led to the emergence of the classical school of management (Najaf Beigi, 2010, p. summary). Organizational attitude emphasizes the basis of division of labor and expertise and administrative hierarchy (Sadeghpour, Moghaddis, 2018, p. 28).</p> <p>It was a series of organizational procedures to increase the efficiency and speed of production machines (Shefritz and Otaha, 2017, p. 52).</p> <p>Since there is the best way to do anything (Najaf Beigi, 2000, p. 13).</p> <p>Taylor tried to get the highest speed and efficiency by discovering methods (Shefritz and Utah, 2017, p. 52).</p>

		<p>Existence of a reward system, discipline, and constant supervision (Shefritz and Otaha, 2017, p. 51). The elements of formal structure are deeply rooted in rationality (Qalipour 2005, pp. 110).</p>
3	<p>The legal authority of managers due to the formal position</p>	<p>Management actions based on formal rules and full-time jobs turn management into a career (Sokas and Knudsen, 2017, vol. 2, p. 36). These theories aim to discover principles that help managers create a formal structure and run the organization rationally and logically (Mozlis, 2005, p. 18). Unity of command: each employee should only take orders from one superior (Iranjad Parisi, Sasan Gohar, 2016, p. 57). Unity of management: coordination of forces is necessary to create unity of action (Iranjad Parisi, Sasan Gohar, 2016, p. 57). Unity in leadership (Shefritz and Otaha, 2017, p. 51). Division of responsibilities between managers and employees so that managers use the principles of practice management in planning the work and the workers do the work (Iranjad Parisi, Sasan Gohar, 2016, p. 51). The scope of supervision is to what extent the manager can effectively supervise the number of people under him (Sadeghpour, Moghads, 2018, p. 28). Personnel management and human resource engineering, which all emphasize "efficiency" and "production," are used (Iranjad Parisi, Sasan Gohar, 2016, p. 47). Fair division of work and responsibility between management and employees so that each takes on the most suitable part for them (Iranjad Parisi, Sasan Gohar, 2016, p. 51). The manager enjoys the prestige of his job, position, and rank. It has a person that originates from the manager's intelligence, experience, leadership ability, and past services and is separated (Iranjad Parisi, Sasan Gohar, 2015, p. 51). The manager is viewed as a superior who is selected and appointed based on legal procedures, and by his position, he exercises power (Iranjad Parisi, Sasan Gohar, 2016, p. 14). Management must be learned and requires knowledge, experience, and skills (Najaf Begi, 2000, p. 13). To what extent can the manager effectively supervise the number of people under him (Sadeghpour, Moghads, 1998, p. 28)?</p>
4	<p>Using the scientific method in examining organization issues</p>	<p>By applying the methods of scientific studies and analysis of organizational problems to solve management problems, Taylor proposed the following steps: A- Identification of the problem. 2- Identification of all influential factors. 3- Measurement of quantifiable factors. 4- Keeping all effective factors constant, except for the investigated factor. 5- Deducing the principles of scientific management based on observation. 6- Proving the scientific validity of the inferred principles through their repeated application (Iranjad Parisi, Sasan Gohar, 2016, p. 48).</p>

**Findings**

The common thought model in schools based on the formal model and the classical school:

According to what was obtained, the three flows classical school are entirely related to each other. Each of them is a defender of formal organizations in which expertise is important to design these organizations. Organization in its formal form is the concept of abeyance and a planned command method. Therefore, these theories can be considered one in a wide range. It means you will know one by studying the other one. The classical school of management was adapted as a support for the formal model. In this way, the similarity of the classical management school with the formal model was confirmed. The classical school's characteristics were investigated as the source of creating the formal model.

Matching the formal model in educational management and classical management shows a typical thought pattern in these two categories of theories. The ideas of the classical school of management were created with the support of capitalist culture and a positivist perspective (Agha Golzadeh, 2015, p. 21). The research shows that in terms of epistemology, Taylorism's theory is based on a positivist view (Sarmadi, Paksarsht, Mehr Alizadeh, 2009, p. 104). Hircom

and Klein (1995) examined organizational approaches and classified classical management theories, industrial psychology, and classical theory in the field of objectivism theory. The process of objectivism is based on the positivist thought pattern and uses the pattern of the natural sciences as a tool for scientific investigations (quoted by Ebrahimpour, 2006, p. 86). The positivist spirit governing the thinking of classical management theory is also the basis of its formation in educational management. It is impossible to deny its contribution to gaining status and proving the validity of educational management as a field of study (Opletka, 2008, p. 10). Summarizing the findings by analyzing the classical school as the basis of the formal model educational system examined the research questions.

**Regarding the existing ontology in the intellectual model of schools based on the formal model**

According to the obtained information, social structures in schools based on the formal model are the same as natural ones. Organizations are considered objective entities. The nature of organizations is orderly, controlled, and rational places. In addition, people in organizations and societies can be organized rationally because positivists believe that the

world is independent of human understanding and can be known through observation (Barbour, 2017, p. 278).

**Regarding the existing methodology in the intellectual pattern of schools based on the formal model**

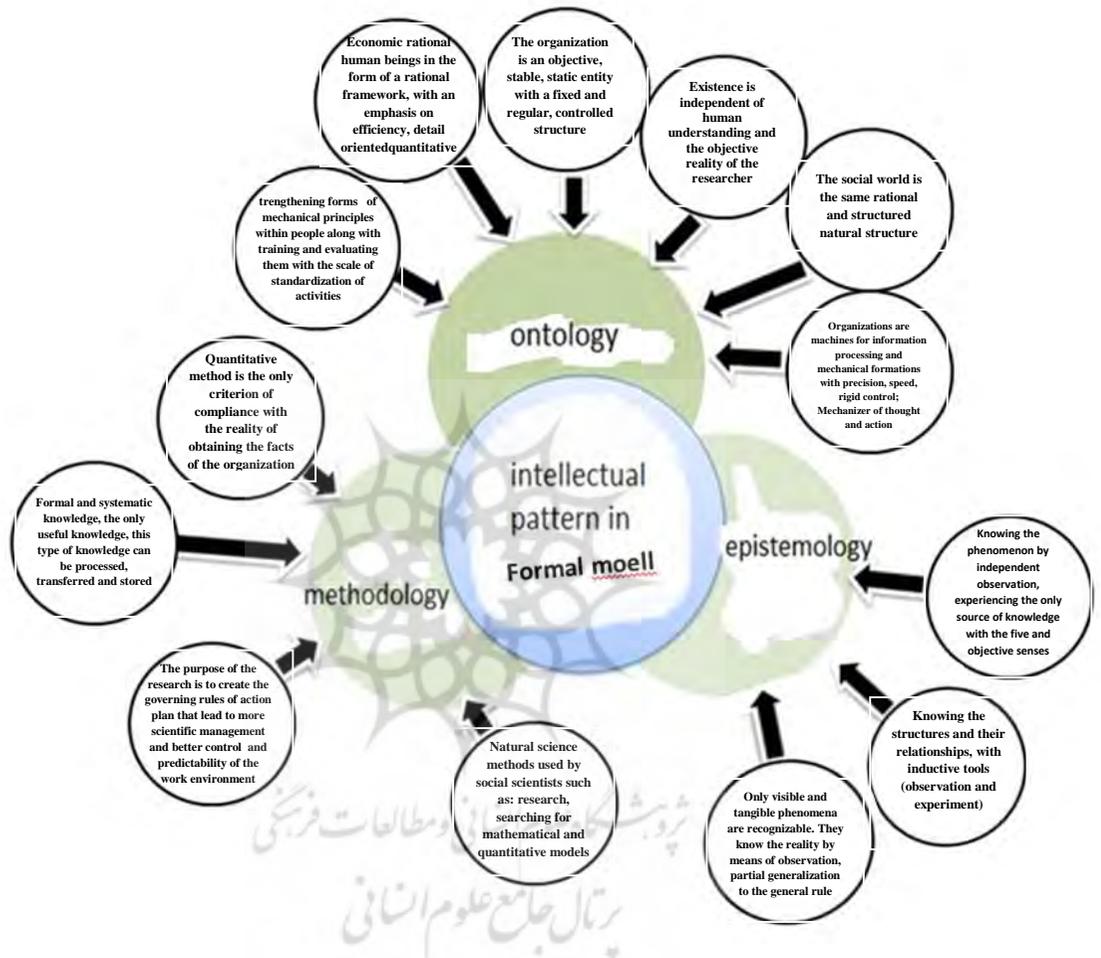
According to the thought pattern of positivists, the quantitative method is the only criterion that proves conformity to reality. They can achieve the organization's facts using quantitative methods, formulating hypotheses, collecting and analyzing data, and testing. They also believe that humans are condemned to experience and that their language is quantitative and statistical. Therefore, experience is the only source that can produce knowledge (Danai Fard, 2012, p. 12).

**Regarding the existing epistemology in the intellectual pattern of schools based on the formal model**

Epistemology clarifies how to achieve valid knowledge in relation to the desired reality (Tahmasabi, 2015, p. 25). The positivist thought pattern states that information gains credibility when it directly corresponds with

observations. They achieve generalizability theorems concerning the experimental world through systematic, comparative, repeatable, and scientific study. In this case, the researcher can predict the events of the experimental world (Gaini, 2011, p. 63). Positivist epistemology assumes that valid knowledge is obtained through experience, concept measurement, and experimental tests (Tahmasabi, 2015, pp. 25-26). According to the positivist school of knowledge, the result is the generalization of particular cases to general ideas based on repeated similarities in numerous tests and counting them. The main function of science is the explanation of phenomena and the power of prediction. In other words, science includes opinions, theories, and hypotheses based on data. Every science complements previous theories. This evolution will continue until science reaches a universal and decisive theory to explain all phenomena, and science will reach certainty and determinism. (Sarmadi, Paksorasht, Mehr Ali). Zadeh, 2009, p. 107).

Figure 1. Intellectual model in formal model



### Conclusions

As found in the comparative study; the intellectual model of schools based on the formal model with classical management; It's the same. In fact, the positivist spirit that governs the thinking of classical management theory is the basis of its formation in schools based on the official model.

Therefore, in the intellectual model of schools based on the official model, social structures are assumed to be the same as natural structures; That is, humans are considered like other creatures. Therefore, the people of organizations can be organized rationally like other components. Methodology in this type of schools is a quantitative method. Man is condemned

to experience and his language is a statistical quantitative language. Therefore, experience is the only source from which knowledge can be produced. Information gains its validity when it is in direct correspondence with observations, and knowledge is valid if it achieves valid knowledge of reality through experience, measurement of concepts, and conducting experimental tests.

The positivist approach and its influence in human sciences began with Auguste kont in the 19th century. They believe that the methods used in natural and human sciences have the same value (Gaini, Hosseinzadeh, 2012). The tendency to use the methods of natural sciences in the humanities emphasized observability (Slife & Williams, 1995). Therefore, the study of human beings in social sciences with objectivity and quantification is considered the same as natural sciences. This claim is often known as "methodological unity" (Johnson, Duberli, 2012, p. 54). Therefore, empirical observation determines the truth or falsity of relationships (Stoker, Marsh, 2016, p. 39). Every observer can confirm the validity of events by directly using his senses (Chalmers, 2015, p. 16).

Traditional, non-scientific ontological methods were introduced when empiricism entered social sciences in the 1960s (Mashirzadeh,

2016). kont theory states that human society reached a positivist worldview from a metaphysical worldview. The thinking way of philosophers such as Hume and Kant is the basis of the positivist thinking pattern (Arthur Burt, 1995, p. 13). Hume considered the origin of all sciences to be sensory data (Barbour, Chapter 6, p. 51). The main aspects of Hume's empiricism can be seen and followed in August Kont's opinions (1853) (Johnson, Doberley, 2011, pp. 45). In addition, the sociological theories of August kont are influenced by Kant (Delaney, 2021, p. 42). Kant also considered proving the principles of Newtonian physics in all his theories. He concluded that human minds are not passive receivers of sensory data but automatically give meaning to the world. Kant tried to show that human uses categories, concepts, and definitions in the ontology that originate from previous cognitive structures (Johnson, Duberli, 2012, p. 120). Kant's philosophy is the basis for forming positivist epistemological theories. His opinions also affect this thought pattern. According to Kant, man only has access to sense and experience, and experience also requires the power of judgment. Judgment has rules that a human being should assume these rules of judgment as a prior existence even before understanding objects with experience.

In addition, all the belongings of the experience outside the mind must necessarily be compatible with them (Ghaffari, 2007, p. 261). Kant believes that the smallest unit of knowledge is acknowledgment. A person can not consider an idea a ruling unless he presents it as objective knowledge (Bakhshaish, 2008, p. 696).

In addition, Kant believes that the root of "causality" is in the a priori composite propositions. Every phenomenon has a cause. The cause cannot be understood, and the judgment has already been made (Bakhshaish, 2008, p. 135). He believed that the human cognitive system has conceptual forms that load everything from outside (Noman) and turn it into a phenomenon. The material comes from the outside of the appeared object, and the mind gives it a form (in the original format). Therefore, the exterior must be according to human knowledge (Ghaffari, 2007, p. 69). Kant blocked the way of general understanding or reasoning reason that can be obtained from the facts of the world to deny the ability of reason to investigate external affairs (Nomen). Many ways were closed when the reasoning ability was questioned. In this process, he tried to make the relevant Newtonian laws deducible and thus obtain mechanical metaphysical foundations (Arthurbert, 1995, p. 20). Kant's epistemology is

dependent on his extensive reflections on Newtonian science. Popper says that Kant made a big mistake in considering Newtonian science certain and dedicating his philosophy to it (Arthur Burt, 1995, p. 18). Therefore, they were satisfied with the best explanation in systems where the ways of rational reasoning were closed (Chalmers, 2015, p. 17). In such systems, physical sciences are created in humanities systems with similar techniques (Mahmoudi Khodayi, Tafarjkhah 2016). Positivist ontology is limited to things that can be known with the five senses. Therefore, it is possible to investigate issues by measuring concepts and conducting experimental tests. In addition, quantitative practical methods can be used as a test to express the validity of theories (Ferlong and Marsh 2002, 22-23). Positivists make it credible by using experimental quantitative methods in humanities studies (Hosni and Alipour, 2007, p. 29). Therefore, the tool used to understand the problems of the practical method is the same method of physical sciences. Epistemology states that theories gain validity when they directly correspond with sensations and observations (Gaini and Hosseinzadeh, 2012). Therefore, the theory's testability is the criteria for standardizing organization theories (Mahmoudi Khodayi; Tafarjkhah, 2016).

Although epistemological research in schools is very limited, but the ideal thought pattern should be taken into consideration in schools. Therefore, based on the findings of the research, it is suggested: the effective educational factors in the intellectual model should be strengthened to lead to the rethinking of the educational style based on the creation of native identity. Because the same pattern is internalized among the members of the society. Therefore, it is suggested by providing opportunities for experiences of native thought patterns, such as creating conditions for creating questions and providing suitable fields for expressing answers and giving direction to correct thoughts.

#### **Ethical considerations**

During the implementation of this research and the preparation of the article, all national laws and principles of professional ethics related to the subject of research, including the rights of statistical community, organizations and institutions, as well as authors and writers have been observed. Adherence to the principles of research ethics in the present study was observed and consent forms were consciously completed by all statistical community.

#### **Sponsorship**

The present study was funded by the authors of the article.

#### **Conflict of interest**

According to the authors of the present article, there was no conflict of interest.

This article has not been previously published in any journal, whether domestic or foreign, and has been sent to the Journal of School Administration Quarterly for review and publication only.

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