

Using Technology with a New Model of Management Development by Simulation of Neural Network and its Application on Intelligent Schools

Ahmad Ghayoumi and Mehdi Ghayoumi

Abstract—Intelligent schools are those which use IT devices and technologies as media software, hardware and networks to improve learning process. On the other hand management improvement is best described as the process from which managers learn and improve their skills not only to benefit themselves but also their employing organizations. Here, we present a model Management improvement System that has been applied on some schools and have made strict improvement.

Keywords—Intelligent school, Management development system, Learning station, Teaching station

I. INTRODUCTION

THE management process comprises various stages which can be termed as functions of management can be elaborated as planning, organizing, staffing, directing and controlling. All the functions of management are primary in nature albeit there are various numerous functions performed by the managers like forecasting, budgeting, reporting, representation and innovation. Management can be defined as “Management consists in guiding human and physical resources into dynamic, hard hitting organization unit that attains its objectives to the satisfaction of those served and with a high degree of morale and work” Chester I. Bernard. Understand principles and practices: the burning angst and furor against the bureaucratic authority mainly stems from the fact, that there has been some sort of exploitation. The plummeting spiral downfall of motivation results due to ‘lack of facility’, ‘pressure of work’ and ‘reduction in available funds.’ From this, it is clearly evident that, the supervisors are the victims of exploitation in the ground of financial parity which doesn’t meet the amount of work load they are putting. Behavior Management is responsible for positive outcome of the business and to maintain interaction with all the aspects of the business. The foremost priority of managerial behavior are to create a ambience of mutual understanding among the employee, to protect the laws and rules of the company, to set boundaries for the members to achieve their goal successfully and finally the managerial behavior is essential to maintain

accordance in working area. Learning Outcomes Management styles can be defined as “the approach and advances initiated by enterprise management to the supervision and control of the operational productivity, task performance and work behavior of subordinates” Styles of management vary according to the degree of management which can be comprehended in terms of direct oversight of subordinates and helpful behavior by managers and supervisors the comparison between two styles of management can be described as:

A. External Environmental Factors of Management Styles

This factor comprises technology, the persisting nature of the expectations of external stakeholder, the nature of market, technology, customer services or client requirements and the level of need for output quality and reliability.

B. Internal Factors of Management Styles

This factor comprises the size and scale of organization, the span of control and hierarchy, capability, capacity and competence of employer and employee categories occupational state and level in the hierarchy and degree to which organization structure is massive. Armstrong (1990) leadership in terms of getting things done through people.

The leadership aspect in the organization and management exists due to the availability of more than one person in the task, task for higher goal achievement strategy, and when managerial functions are to be carried smoothly the success of Organization and every firm depends upon the quality of leadership. The characteristics of leadership can be classified as:

1. Leadership Implies the Emergence of Followers

The amount of followers signifies the impact of the leader and the quality of leadership. It is the foremost requirement in management to maintain the proper leadership quality in order to achieve the desired results.

2. Leadership Applies an Unequal Distribution of Authority among Leaders and Group Members

Proper leadership enables the smooth functioning of the enterprise. The correct amount of work is distributed by the leader according to the authorities in organization.

Ahmad Ghayoumi is chief manager of a governmental educational complex in Tehran-Iran and lecturer of Islamic Azad University and PhD student of Taras Shevchenko National University of Kyiv (phone: 98-912-196-4096; e-mail: hghayoumi@yahoo.com).

Mehdi Ghayoumi is a PhD Student (Phone: 98-912-312-3350, e-mail: ghayoumi_me@srbiau.ac.ir).

3. Leadership involves a community of Interest between the employer and employee

The main objective and perspective of the leader is to maintain a formal accord between the employer and employee in order for a smooth functioning of the Organization [2-3].

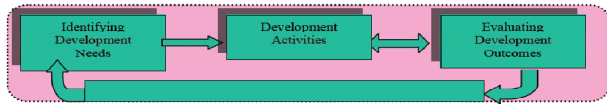


Fig 1 Dimensions/units of management development

The intention of the above commentary is to demonstrate the complex nature of MD processes, from which to build a theoretical framework for researching this in practice. In addition, it demonstrates the comprehensive nature of this categorization. In articulating the building blocks of the model, Figure 1 presents these as a system, with an indication of the relationship between these dimensions. In follow we present a brief description on information management system, show our model in each level, experimental results and finally conclude some results and inference that can be so helpful in all management Developing systems.

II. INFORMATION MANAGEMENT SYSTEM

Information management (IM) is the harnessing of the information resources and information capabilities of the organization in order to add and create value both for itself and for its clients or customers. Information management is the management of organizational processes and systems that acquire, create, organize, distribute, and use information. We adopt a process view of information management. In this view, IM is a continuous cycle of five closely related activities:

- identification of information needs;
- acquisition and creation of information;
- organization and storage of information;
- information dissemination;
- Information use.

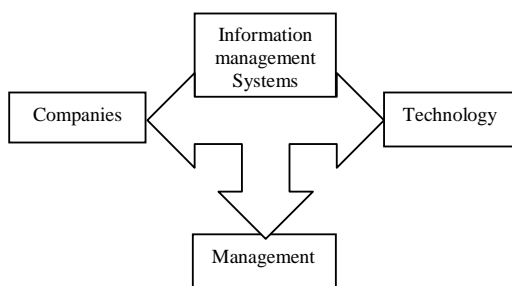


Fig. 2 Model of information management systems

Fig. 2 shows three major parts of information management systems (IMS) that are directly effective on this type of management. The idea underlying IM is that just as an organization purposefully and systematically manages its human resources or financial assets, it should do likewise for its information resources and processes. All the classic functions of managing an organizational activity apply to IM as well: defining goals, providing leadership, developing

policies, allocating resources, training staff, evaluation and feedback. An information strategy describes the overall direction and general framework in which the organization's information resources and processes should be managed so that the organization would achieve its most important goals. An Information Strategy typically consists of the following: IM goals and objectives that are well aligned with the organization's mission and vision IM principles that articulate desirable outcomes and form the foundation for developing information policies One or more areas of strategic focus: this could be some critical information content; common information to be shared; some information-intensive process; or new information-based products or services [4, 5, 6 and 7].

III. INTELLIGENT SCHOOLS

At the beginning of the twenty-first century 'school' still remains the 'place' where the vast majority of our young people are formally educated. This was evidenced by the plight of girls in Afghanistan at the turn of the century and remains the reality for several million young people in Africa for whom there is still no formal schooling. Time therefore in school is precious and for pupils it cannot be repeated. Schools serve the needs of the present and the future. They have a crucial role to play in the lives and learning of their pupils now and as they inherit the daunting and exciting tasks that face them as citizens in the twenty-first century. Schools also have a responsibility for their future students. The key lesson from research about effective schools is that schools can make a difference for the better or even for the worse. This is a very powerful message, probably the most powerful that has come from this area of literature. It both empowers and challenges practitioners, bestowing the possibility of making a difference to the life chances of children alongside giving them responsibility for doing so. It heightens the imperative to ensure that our education system meets the needs of all pupils.

In the school effectiveness and school improvement (SESI) literature there has been general acceptance that an effective school can be described as: 'one in which pupils progress further than might be expected from consideration of its intake' and one which 'adds extra value to its students' outcomes in comparison with schools serving similar intakes'. However, the assumptions about the purpose of education underlying these definitions of effectiveness are rarely challenged and explored. Schools serving very similar intakes can give their pupils very different experiences and achieve different outcomes for their pupils, and there is growing evidence that this is the case. But we would argue that there is now an urgent need to reconsider these definitions of effectiveness in the context of reconsidering what it means to be an educated person. In particular, there are three significant changes to which we want to draw attention [13]:

- Unprecedented large-scale educational reform being undertaken in the UK and in many other parts of the world;
- The revolution occurring in information and communication technologies (ICT);
- Fundamental social and economic global changes

IV. NEW MODEL OF STRATEGY

In each system, we have a group of goals that are aimed by manager of system and each goal has set of sub goals. In each level of management, tasks should be done till sub goals can be operated, but getting feedback in each level and through all system can be done by a manager and giving a matrix of weight in each level can be effective for balancing each level's tasks with final goal or goals. MacMillan Matrix developed by Dr. Ian MacMillan, is specifically designed to assist nonprofit organizations to formulate organizational strategies. We use this matrix to affect it on our effective parameters each level and find weights that are final achievement for getting final goals approaching [8, 9, and 10]. In follow you can find a model of finding final approximation of goals in each level. This model is a simple model that has a number of inputs followed by a single output. Based on the inputs into this, the steps will either run or continue or not. The determining factor for a step running or not is determined by its inputs and each input's specific weights. You can think of a simple model as a logic process with more complex goals, but resulting in the same action. As a result of this, this model can be used to many applications and states. However, due to its complex input, it cannot model all logic process. These are the areas of management, error, and training. The way that model work is that, we usually have a set of data that we want to feed into the system and illicit some kind of response. These data can be achieved by us or other practical and real able ways, because the rightness of them is so important in management process. What we can't really change is the input values as our initial goals. However, what we can do is to re-adjust the weights that are used to calculate our final goals. This is what we deal with when we get into the area of management. Management for a model is what is known as supervised management with reinforcement. That is, we have some kind of specific output we are looking for. Through iterative circle, we can adopt our sub domain to our desire goals that we want and these will be lead to our final goal. This form of management is supervised because we know what the output of the system should be [11- 12]. In this model as a supervised management model, one of the key points is monitoring system in any ways and solutions continually. Any gap or error on data can make a delay in system. Of course one of the advantages of this model is that it makes correct any mistakes and errors in next steps, but we should avoid as much as possible from any incorrect data to achieve final goal sooner.

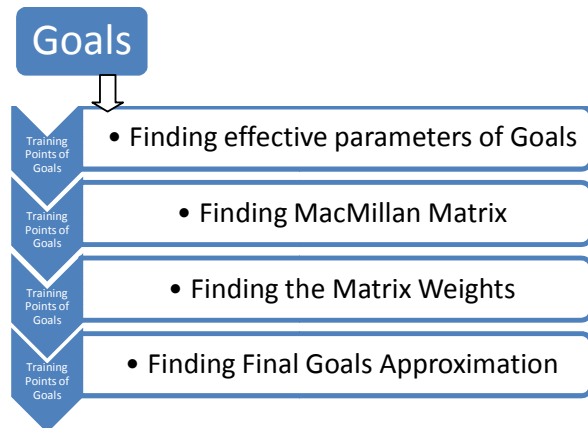


Fig. 3 Model of finding final goals approximation in each level

In Fig. 3 you can find an improved model of strategy for management. In this model, all goals are verified and supervised with some parameters that are affective through the entire of process. Finding the weights and MacMillan matrixes are the key points of this model.

V. EXPERIMENTAL RESULTS

Results have been comparing on normal schools, intelligent school without management improvement and intelligent school with management development. The most important parameters in this system were time and place that manager should regard both of them in decision making process. It shows better results in total.

TABLE I
EXPERIMENTAL RESULTS ON SOME SCHOOLS ABOUT TIME AND PLACE IN AVERAGE (L=LEARNING, T=TEACHING, S=STATION)

	L.S.Time	T.S.Time	L.S.Place	T.S.Place
Normal School	90	35	100	100
Intelligent school without New Strategy	75	30	92	92
Intelligent school with New Strategy	35	14	37	8

VI. CONCLUSION

Here, we present a model Management Improvement System that has been applied on some schools and have made strict improvement. Experimental results show a clear efficiency on time about both stations of learning and teaching. This model has been applied on intelligent schools but can be regarded on other systems to getting better result and make new changes on them with a high supervisory management improvement system.

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REFERENCES

- [1] Ashton, D., Easterby-Smith, M., & Irvine, C. Management development: Theory and Practice, Bradford, MCB Monographs(1975).
- [2] Cullen, J., & Turnbull, SA meta-review of the management development literature. Human Resource Development Review, 4(3), 335-355. (2005).
- [3] Doyle, M. Management Development. In Beardwell, I., Holden, L. & Claydon, T. (Eds.) Human resource management a contemporary approach (4th ed.) London: Prentice Hall. (2004).
- [4] Garavan, T. N., Barnicle, B., & O'Suilleabhain, M.. Management Development: contemporary trends, issues and strategies. Journal of European Industrial Training, 23 (4/5), 191-207, (1999).
- [5] Kenneth C.Laudon and others, "information technology and society" Wadworth ,Inc ., 37 – 48,1994.
- [6] Hitt, W. D. A unified development programme. Journal of Management Development, 6 (1), 43-53 (1987) .
- [7] Jameson, S., & Holden, R. Graduateness-who cares? Graduate Identity in small hospitality firms. Education and Training, 42 (4/5), 264-271. (2000).
- [8] Gorge w.Ronalds , "information for management" , Third Edition new york west publishing co. , 1999.
- [9] Lees, S. Ten faces of management development. Journal of Management Development, 23(2), 89-105. (1992).
- [10] Litteljohn, D., & Watson, S. Management Development Approaches for the 1990's. International Journal of Contemporary Hospitality Management, 2(2), 36-42. (1990).
- [11] Mabey, C. Mapping management development practice Journal of Management Studies. 39(8),1139-1160. (2002).
- [12] Pedlar, M., Boydell, T., & Burgoyne, J. Towards the learning company. Management Education & Development, 20 (1), 1-8. (1989).
- [13] Barbara MacGilchrist, Kate Myersand Jane Reed," The intelligent Schools: SAGE Publications, ISBN 0 7619 4774-4, 2004.

Ahmad Ghayoumi is a chief manager of a governmental educational complex in Tehran-Iran; He is working as a lecture in Islamic Azad University and has special experiences in management system in governmental companies and institutes. Nowadays, he is a PhD student of *Taras Shevchenko National University of Kyiv*. He has taught for several years in many educational levels and has a special expertise in teaching and learning.

Mehdi Ghayoumi is a lecturer of university. His fields are artificial intelligent, Image processing and pattern recognition. Nowadays, he is a PhD Student (Phone: 98-912-312-3350, e-mail: ghayoumi_me@srbiau.ac.ir).