

Improving mental models through learning and training ——Solutions to the employment problem

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Abstract: The increasing flat, diverse and complex and has now entered the era of knowledge economy in the world, whether business or personal, in order to maintain long-term competitiveness and vitality, it must be continuing to improve mental models, keep the change corresponds to a flexible and open, the "spiritual conversion". With the introduction of the concept of mental models, people pay more attention to the psychological factors which the management. By analyzing the meaning and connotation of mental models, learning and training employees to improve their mental models to meet the employment requirements of the development of the times, through two levels: the enterprise level with the staff at the individual level to improve the mental models, to enhance corporate and individual competitiveness.

Keywords: Mental Models, Learning, Training, Employment Problem

1. Introduction

With the rapid development of the global economy, today's businesses or countries in order to have a relatively long-term competitiveness must be constantly learning, active learning, effective learning, the only way companies or countries in the midst of an environment to be able to maintain a sustainable living and healthy and harmonious development. This study, it is not only to obtain new knowledge and information and, more importantly, changes in the way of thinking and values of people's soul. The transformation of this way of thinking and values mean that people improve their own mental models. Mental models to be effectively improved, people will really take the initiative and lasting learning to understand and transform the world around, constantly self-transcendence.

Mental models (Craik, 1943) concept was first put forward by the Scottish psychologist Kenneth Craik in 1943, refers to those deep-rooted understanding of the world affect how people interpret the world, to face the world and how to take action in the minds of many of the assumptions, stereotypes, or impression. Been widely recognized in the literature, the most cited Peter Senge on the definition of mental models. Peter Senge (1990) in his book "The Fifth Discipline" mental models are deeply ingrained in the mind, affect how people understand the world how to take action many of the assumptions, stereotypes, or images, impression (Senge, 1990). Ning Xiaoyong & Cui Yueming (2009) , the mental model is due to the living environment of the past, life experience, professional background, knowledge, literacy and other aspects of certain values in the long life, ways of thinking, behavior, and it determines people how to look, think, solve problems, is a reflection of people of ability and accomplishment (Ning & Cui, 2009).

The notion of shared mental models (or collective mind) has received considerable attention in management and organizational psychology literature (Klimoski & Mohammed, 1994; Weick & Roberts, 1993). Holyoak (1984) defined a mental models a "…psychological representation of the environment and its expected behavior." (Holyoak, 1984). Rouse and Morris (1986) further noted that if a group shares a mental model, it serves as the basis for future event prediction and choice regarding courses of action (Rouse & Morris, 1986). Such diagnoses and decisions are all fundamental to the safety process in any organization. For example, Weick and Roberts (1993) examined aircraft carrier processes and demonstrated that groups with shared models perform more effectively than those without a "collective mind." Shared mental models are the result of selection, training, and experience, and they are more likely to exist under conditions of cohesiveness and membership stability. Furthermore, they are particularly important in environments requiring nearly continuous operating reliability: "Organizations concerned with reliability enact mental processes that are more fully-developed than those found in organizations concerned with efficiency".

2. The company

2.1. Communication in team

Improve the mental models is to expand the organization internal communication within the organization each member of each other to open their hearts, "face to face in-depth exchanges. Only in this way, people can make

each other understand their own mental models, exposing the defects of which the other party will also calm voice their opinions, allowing people to enrich their knowledge by learning from different people's thoughts, perspectives and views of improving mental models. By the real depth of dialogue, the group can enter an individual alone cannot enter the larger "common sense brings together", enables organizations of every member to be a winner.

2.2. Create a continuous learning environment

To improve the organization's mental models, the first and very important point is to create the atmosphere of continuous learning, and each member of the organization to open their inner world through the "learning" to constantly improve their own mental models. In an organization which the leader is not only the interests of the creators, but also organized the founder of the cultural. Therefore, improve the leader's mental model to create a culture of continuous learning which plays a key role. Mental models of the so-called leader is the leader in the formation of long-term live, work and practice, a way of thinking, behavior and values. The leader's mental model is not only a direct impact on their own leadership style and organizational decision-making, but also affects the cultural atmosphere of the entire organization and organizational innovation. If the leader of an organization on mental models has serious shortcomings, the heart which does not attach importance to organizational learning, mental models of the organization there must be a big problem, let alone to create a strong learning culture. Conversely, if the leader of an organization can continue to improve their own mental models, a good grasp of their behavior, focus on learning from the heart of them, to promote learning, lifelong learning in the organization to set a good example, then this can not only improve the leader management capabilities, and improve an organization's mental models, in particular, to create a culture of continuous learning will play a very active role.

2.3. Basing on the employees

Xiang Kaibiao (2009) Companies should treat the employees as important assets, as they can create value for the company and outstanding employees can create more value (Xiang, 2009). Some companies reduce costs through cutting the number of employees, which will have effects in a short term, but can also bring unpredicted results. For example, existing or potential customers may leave, and suspicions from inside and outside the companies will enlarge the influence of the crisis. Simple and crude layoff won't help reduce the burden on companies, but may cause loss of technicians and skilled managers. What is the

most important, the corporate culture and spirit brought up in years' work may collapse, and the excellent employees may leave. In this way, to companies, it is better to take flexible measures against the crisis, instead of layoffs, to stabilize the confidence of the employees. Without confidence, a company hardly can walk out the difficulty.

For example, Ningxia Tongda Coal Group Company doesn't take measures like production cuts or layoffs, or even reducing salaries. The strategy of the company is to keep production, if there is enough cash flow, as the company will have a faster development than other companies when the fundamental of the market changes. The decision by the management team was welcomed by the employees, and their loyalty and the team-spirit are improved.

2.4. Organizational learning

The paper focuses on the Huber's model of organizational learning. After reviewing the theoretical literature (Lei, et al., 1999; Slater & Narver, 1993) and empirical research (Baker & Sinkula, 1999; Hurley & Hult, 1998; Jerez-Gomez et al., 2005; Tippins & Sohi, 2003), the present study adopts the organizational learning scale of Lopez et al. (2004). This thesis quoted Jiménez-Jiménez & Sanz-Valle (2011) research measures organizational learning as a single construct, made up of the four behavioral dimensions of this process. A second order factor analysis demonstrates that the four dimensions reflect a higher-order construct (Table 1). They use LISREL 8.50 to estimate the measurement model. The results suggest a good fit of the second-order specification for the measure of organizational learning ($\chi^2=117.19$, $df=61$; goodness-of-fit index [GFI]=0.96; root mean square error of approximation [RMSEA]=0.044; comparative fit index [CFI]=0.98; Tucker-Lewis index [TLI]=0.97; incremental fit index [IFI]=0.98). The GFI, CFI, TLI and IFI statistics exceed the recommended threshold level of 0.90 (Hoyle & Panter, 1995). The RMSEA is nearly 0.050 and the root mean square residual [RMR] and standardized RMR are 0.029 and 0.035, respectively, which indicates an acceptable fit.

Table 1: Second-order confirmatory factor analysis of organizational knowledge.

First-order construct	First-order			Second-order	
	Indicator	Loading	t-value	Loading	t-value
Knowledge acquisition	KA1	0.58	_a	0.49	9.69
	KA2	0.7	10.56		
	KA3	0.83	11.12		
Knowledge distribution	ID1	0.72	_a	0.69	14.02
	ID2	0.76	13.92		
	ID3	0.73	13.53		
Knowledge interpretation	II1	0.81	_a	0.61	14.28
	II2	0.76	15.01		
	II3	0.62	12.47		
Organizational memory	OM1	0.64	_a	0.36	8.11
	OM2	0.83	14.49		
	OM3	0.8	14.08		
	OM4	0.92	15.33		

Fit statistics for measurement model of 13 indicators for four constructs: $\chi^2(61)=117.19$;

GFI=0.96; RMSEA=0.044; CFI=0.98; TLI (NNFI)=0.97.

^a Fixed parameter.

From: Daniel Jiménez-Jiménez, Raquel Sanz-Valle.2011. Innovation, organizational learning, and performance Original Research Article. Journal of Business Research, 4(4),408-417.

2.5. Innovation and Research

Though the overseas is weak and orders decrease, some strong export-oriented companies managed to reduce the bad effects of the financial crisis, through boosting self-development and research, innovating the technology, improving product mix for export and so on.

Fujian Hongyuan Group is a company focusing on exporting textile fabrics. Due to the international financial crisis, the company had an export value in 2008 16.0 plus million US dollars lower from a year ago, two production lines were idled, and more than 400 workers laid off. All these meant the company was in danger. But, in the later half of 2008, Hongyuan Group and Institute of Chemistry, the Chinese Academy of Sciences together successfully developed “new renewable bamboo fiber textile material”, which has a leading technology in the world, and got independent intellectual property rights. During the 2nd Asian Sporting Goods Exhibition held in Hongkong in Nov 2008, this new material interested more than 220 overseas customers, and brings back the orders. In 2009, the company opens a new production line for the new renewable bamboo fiber textile material, which provides 500 plus job positions, meaning Hongyuan employs 100 plus new workers.

3. For the individual

People should do something when facing unemployment, as people should improve their skills for the salaries all the time. Senge (2000), in his book *Schools that Learn*, simply stated that when individuals become aware of the sources of their thinking they begin to understand their mental models. Jonassen (2000) Mental models are complex and inherently epistemic (and that) they form the basis for expressing how we know what we know. Because mental models are epistemic, they are not readily known to others and, in fact, not necessarily comprehended by the knower. Mental models, like all knowledge, must be inferred from performance of some sort.

How does one transform mind-sets? Often one's mind-set is the product of concepts and contexts one has grown up with and developed over a significant portion of one's life (Craik, 1943; Johnson-Laird, 1983). International business research has much to say about the global mind-sets (Gupta & Govindarajan, 2002; Harveston, Kedia, & Davis, 2000; Jeannet, 2000; Levy, 2005; Lobel, 1990; Murtha et al., 1998; Perlmutter, 1969). To change a mind-set means to motivate an individual to challenge the status quo, search for alternatives, provide concepts and contexts for new cognitive structures, and provide sufficient logic and reasoning so the participants replace existing structures with new ones (Muñoz, Mosey, & Binks, 2011) .

3.1. Learning model

Greenaway (2002), explained that learning models are theories about how people learn. Greenaway researched how to create learning cycles (models) based on different theories of experiential learning and how to apply them to teaching and training. He went on to state that experiential learning can also be applied to almost any type of learning that occurs through experience, and that it is often used by instructors in a structured learning procedure that follows a cyclical model. Neill (2004) believes, there has been extensive research conducted on learning models called experiential learning cycles. Experiential learning cycles are models for understanding the process of learning works.

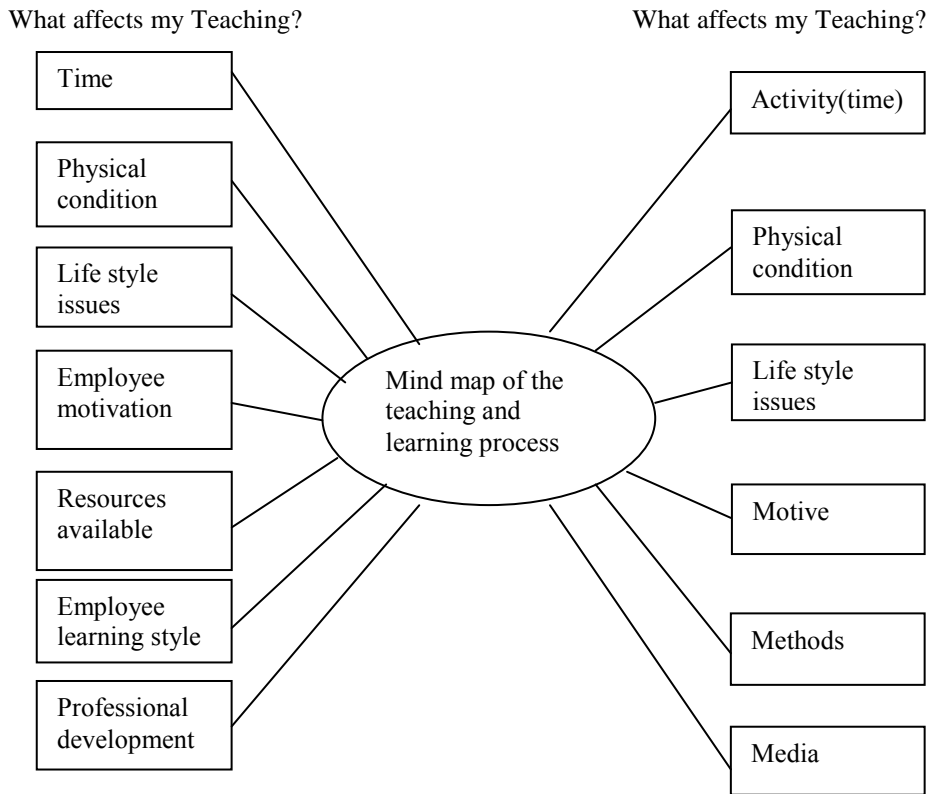


Fig. 1: Participant #1's (PI) mind map on the teaching and learning process.

From: Bogner, Leonard A.2007.Emerging mental models of teaching and learning Using lesson study in a career and technical education course. Ed. D. University of Minnesota.

3.2. Training strategies

Researchers have sought to determine effective training strategies to convey appropriate content (Olfman & Mandviwalla, 1994) .Conceptual training uses metaphorical techniques to convey the workings of a system. This may take the form of describing the overall structure and integrated workflow of the system and instructing end-users on a new system by drawing analogies in terms of a system they are already familiar with (i.e., database software), in terms of the training strategy framework, this approach would increase the knowledge-levels of training to add a tool conceptual component.

Many employees have examined the impact of application knowledge on mental model development, as measured by mental model accuracy. Specifically, these employees have reinforced the concept that end-user trainees with specific application knowledge have improved strategies and performance

outcomes, suggesting an accurate mental model (Mack, et al. 1983; Polson & Kietas 1985; Karat, et al. 1986; Polson, et al. 1986; Ziegler, et al. 1986; Black & Bechtold, 1989; Igbaria, 1993; Satzinger & Olfman, 1998) .

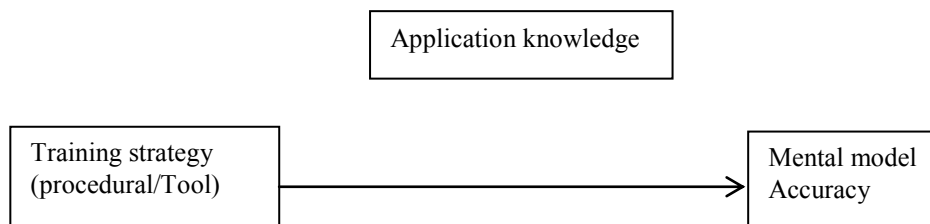


Fig. 2: Application knowledge influence on training methods and mental models.

From: Coulson, Antony.2002.ERP training strategies The role of knowledge-levels in the formation of accurate mental models. Ph.D. The Claremont Graduate University.

3.3. Improve personal competing ability

Personal competing ability refers to the ability that keeps the oneself advancing others in the same competing conditions through continuously strengthening and improving oneself's skills. In this way, you can have more chances and can create more value than others.

For example, we notice that more companies in the talent market seek for technicians or skilled workers, which means experienced workers often have more chances and better salaries and benefits than the common workers, the competing advantages of experienced workers on common ones.

Microsoft found that in the statistics of 7 main layoffs since 1996, employees in technology and sale departments have a very low unemployment ratio, never exceeding 10%, as these departments are where the core competition ability comes from. Now many high officials from companies are trying to improve their knowledge in Chinese and Chinese Culture, learning a foreign language, or having a college class, in order to keep their competing advantages. Now the demand for small languages experts is strong, but the reserve is not that large. Learning or improving the skill of second foreign language become popular among the college students and the white-collar.

3.4. Adjust the idea of employment

Facing the talent competition, employees should get a clear understanding of the job market, and adjust the ideas of employment accordingly, form a positive attitude towards the life and the future, and improve the skills. Meanwhile, the

employees should initiatively participate in training projects, get experiences and improve skills, planning for self-own carrier and development plan.

Change the old idea of employment, and form a pragmatic and diversified attitude. No hurry in finding a perfect job in one-step, and seek for a development with a position. Now, stay calm and learn some basic skills, making preparation for future opportunities.

3.5. Create self-own businesses

Facing the talent competition, many people have lost jobs, but it is an important way to solve the problem of unemployment to set up self-own businesses, as it not only can solve the problem of self own, but also create more positions. It is estimated that one new business can add 3 to 4 new positions.

The owners of Happy Pot Boiled Food, a food brand in Shenyang City, Miao Guoqing and Zhao Qingxiang, are two former army officials, who served in the army for 26 years. Since 18th June the first shop opened, the brand has had 14 chain shops, and paid more than 1.0 million RMB of tax. Now the company is planning to establish a national brand. This is a good example.

4. Conclusion

In this paper, through the literature review to explain the learning and training to upgrade and amends employee's mental model to deal with the future talent competition, it is the main way through the company and individual two aspects to solve the problem.

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