

A Review of The Research on The Error Management

Zhiyang Lv^{a,*}, Bixiang Zhu^b

^a672211327@qq.com, ^bzhubixiang@tom.com

*Corresponding author

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Abstract: Faced with dynamic, complex external environments and the bounded rationality of human beings, it is difficult for individuals to avoid errors through limited knowledge and ability. Mistakes in the organization are also inevitable, and how to deal with mistakes becomes a real problem for every organization. Error management treats errors in a positive way and is an important complement to organizational error prevention strategies. This paper summarizes the literature on error management at home and abroad, in order to help the follow-up research.

1. Introduction

Employees will inevitably make mistakes in their daily work, which will bring a series of impacts to the organization, such as declining performance, and even lead to the organization's demise. Different organizations often adopt different attitudes toward employee errors, and different attitudes have different effects on employee behavior. [1] Zhu Yingjun et al (2011) [2] believe that error management can improve organizational performance through organizational innovation. Van Dyck [3] believes that learning from mistakes is one of the main ways for humans to learn knowledge. Error prevention and error management are two different strategies for organizations to deal with errors. The former emphasizes the avoidance of errors, while the latter emphasizes the positive response after the occurrence of errors, with the aim of reducing the negative consequences of errors and increasing their positive impact. At the beginning of the 21st century, domestic scholars represented by Wang Chongming and Hong Ziqiang (2000) showed great interest in the atmosphere of error management. Regrettably, few scholars followed in time. In recent years, along with the rise of learning organizations and innovative organizations, the error management atmosphere has re-entered the vision of scholars as an important driving factor (Yin Runfeng and Zhu Yingjun, 2013; Chen Wenpei, 2013; Du Pengcheng et al., 2015). The current research on error management atmosphere focuses on its effects, such as organizational performance (vandyck et al., 2005; Wang Zhongming et al., 2008), innovation (Li Yi et al., 2013), and individual-level error reporting (Gold et al. 2014), innovation (Du Pengcheng et al., 2015), safety behavior (casey and krauss, 2013), etc., and the research on its concept evolution, measurement development and influencing factors are still scattered. [4] Hong Ziqiang discussed the application of error management in human resource management, workflow design, and overall quality management. [5]

2. Error management related

2.1 Error Management

The academic community divides the way of handling errors into error prevention and error management, and emphasizes the positive role of error management. Error prevention refers to trying to prevent the occurrence of errors in the work to achieve organizational goals or accomplish tasks to avoid bad. The organizational system and practice of the consequences. [4] Van Dyck believes that because the effective management of errors can minimize the negative impact of errors, play the positive effects of errors, and improve the competitiveness of organizations and individuals, the current research focus on error issues is increasingly focused on Exploring how to deal with errors

actively and proactively, emphasizing learning from mistakes, that is, error management. [5] People treat mistakes as negative things, and organizations take steps to prevent mistakes. But mistakes also have positive effects, such as promoting learning and innovation. If an organization can incorporate errors into its day-to-day management, that is, error management, it can systematize this near-unconscious random growth approach and help companies grow rapidly. [6]

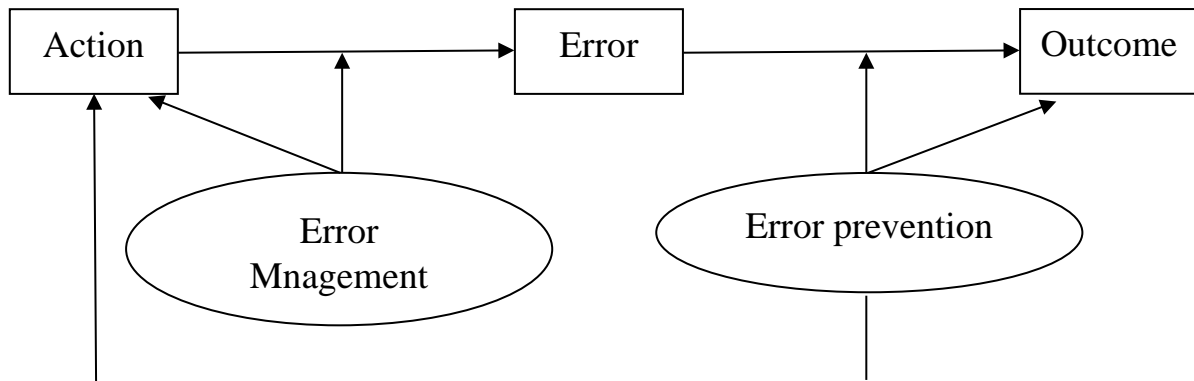


Fig.1 Related concept map

2.2 Error management atmosphere

The atmosphere reflects a shared set of rules, values, practices and procedures. The error management atmosphere is the employee's common perception of organizational error communication, error knowledge sharing, error environment improvement and error handling related practices and behaviors. It is the organizational practices and procedures that employees perceive to support error management. The error management atmosphere refers to the relevant organizational practices, procedures, and attitudes. In short, it refers to the ways and means of organizing errors. Yin Kui et al. defined the error management atmosphere as: common practices and procedures related to errors in the organization aimed at minimizing the negative consequences of errors and enhancing the positive effects of errors. Typical error management practices and procedures include: error communication, error knowledge sharing, mutual help behavior after error occurrence, rapid identification of errors, analysis of error causes, coordination of errors, and efficient processing. Van Dyck [4] summarized the content of error management atmosphere and divided it into two dimensions: positive (positive) and negative (negative). It believes that organizations can establish the sharing of organizational members through appropriate error management atmosphere. Values, influence the behavior of organizational members, accelerate the efficiency of knowledge transfer, promote organizational innovation, and thus improve performance. The positive error management atmosphere is more tolerant, allowing members of the organization to make mistakes and tend to loose organizational culture. Wang Zhongming [18] pointed out that error competence, error communication, error thinking and error learning can reduce the negative negative consequences caused by mistakes, and thus increase the positive consequences caused by errors themselves. These are positive error management atmospheres.

2.3 Measurement of error management atmosphere

The error management atmosphere is divided into mixed and active. The difference between the two is whether it contains negative aspects. The mixed management error management atmosphere includes two aspects: positive error management atmosphere and negative error management atmosphere. It was first studied by Rybowskiak (1999). He compiled a scale of EOQ individual error orientation, a total of 37 measurement items. It is divided into eight dimensions: error risk, error ability, error tightness, error communication, error concealment, error thinking, error learning, and error prediction. Later, Van Dyck (2000) adapted the EOQ scale and re-divided the error management atmosphere into four dimensions: consciousness, mastery, socialization, and error resentment. The error management atmosphere can be divided into two dimensions, namely positive

(tolerance, learning orientation) and negative (aversion, punishment-oriented) error management atmosphere (Yin Runfeng, 2012). Van Dyck (2000) adapted the individual error-oriented entries and developed an error management climate questionnaire containing four dimensions of mastery, social, awareness, and error resentment. Wang Chongming and Hong Ziqiang also measured the error management atmosphere through the adaptation of the individual error orientation questionnaire, and simplified it into three dimensions: error mastery (positive), error prediction (positive), and error pressure (negative). Chen Wenpei divides the error management atmosphere into dominant factors and hidden factors, among which the hidden factors include error processing (positive), error communication (positive), error risk (positive), error resentment (negative), and dominant factors. Refers to the organizational error management system (positive).

3. Error management atmosphere related variables

3.1 Innovative behavior

Li Yi (2013) believes that in the positive error management atmosphere, members of the organization have more trust in the organization, are willing to venture to explore new things, have the motivation to think about new ideas, and thus can promote exploratory innovation. Bell and Kozlowski (2008) pointed out that error management has the same principle as organizational learning. A positive error management atmosphere can effectively stimulate the learning goal orientation and learning passion of employees in the organization, thus enhancing the initiative of organizational learning. Bledow et al. (2009) believe that errors in work will lead to certain thinking and exploration, and that innovation activities are the product of uncertain behaviors. A good error management atmosphere can motivate employees to actively explore the enthusiasm of seeking knowledge and innovation, thus driving the improvement of organizational innovation level.

3.2 Organizational Performance

Wang Chongming believes that the error management atmosphere promotes the members' communication and analysis of mistakes, encourages them to learn from mistakes, and learns to deal with errors that may occur in the work, rather than worrying about mistakes or trying to cover up mistakes at work. Van Dyck et al. (2005) theoretically proposed the impact of the error management atmosphere on organizational performance. The process believes that the error management atmosphere can amplify the positive effects of errors (such as innovation, learning, business process optimization, etc.), reducing the negative consequences of errors, thereby improving Organizational Performance. [4] Gronewold et al. (2013) argue that the error management atmosphere can improve the consistency and synergy of organizational members' actions, thus promoting organizational efficiency; Zhu Yingjun and Bai Tao (2011) believe that the error management atmosphere can improve organizational performance through organizational innovation.

4. Discussion

First, the study of the dependent variable, the selection of the outcome variable and the mechanism of action before error management needs to be further expanded. For example, Chinese scholars often develop from the individual level when examining the impact of error management atmosphere, and lack of research on the relationship between error management atmosphere and organizational level variables, which not only causes the complexity of existing research, but also leads to the research of error management atmosphere. On the surface, it is difficult to advance further. In addition, dimensional scholars on error management also have different views. The inconsistency between the connotation and dimension definition of error management derivative variables will lead to confusion in empirical research results and difficult theoretical research.

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