

What is the Impact of Ambidextrous Learning?

Ping Wang ^{1,a}, Qinyan Lian ^{1,b,*}

¹Department of Business Administration, Zhejiang Sci-Tech University, Hangzhou, China
a. wp190923@163.com, b. 17826856686@163.com

*corresponding author

Keywords: ambidextrous learning, exploitative learning, exploratory learning

Abstract: With the advent of the knowledge economy, ambidextrous learning as a new learning method has attracted extensive attention from scholars. At present, the definition and internal relationship of ambidextrous learning is not yet clear, and it needs to be further explored by scholars. This article mainly uses the VOSviewer to visually analyze the domestic and foreign literatures about ambidextrous learning and draws the research hotspots and compares them.

1. Introduction

With the arrival of the era of knowledge economy, the external environment is rapidly turbulent and the market competition is unpredictable. If organizations, teams or individuals want to be in an invincible position, they must have the exploration and learning of external knowledge and the utilization and learning of existing technologies and paradigms, which is called ambidextrous learning. This paper will systematically sort out the domestic and foreign literatures on ambidextrous learning in order to achieve the following research purposes: to clarify the concept and measurement methods of ambidextrous learning; exploring the internal relationship of ambidextrous Learning; to compare the research hotspots of ambidextrous learning at home and abroad by VOSviewer.

2. The Concept of Ambidextrous Learning

In 1991, Mark creatively introduced the concept of "ambidextrous" into the learning field in the process of studying the organization's adaptation to the environment, and collectively referred to the two contradictory learning methods of exploratory behaviour and exploitative behaviour as ambidextrous learning [1]. Due to translation reasons, scholars at home and abroad have different names for ambidextrous learning [1,2,3], but there is not much difference in essence. The current research is mostly carried out from three levels: individual, team and organization. The main viewpoints are summarized in Table 1.

Table 1 shows that, at different levels, due to different research perspectives, there are large differences in the definition of exploratory learning and exploitative learning. From the individual level, the concept of ambidextrous learning is mainly distinguished from the perspective of

knowledge and technology; from the team level, the concept of ambidextrous learning is added to the original perspective from the perspective of employees; from the organizational level, also added a customer perspective.

Table1: Definitions of ambidextrous learning.

| Research level | scholar | Definition | |
|----------------|-----------------|---|---|
| | | Exploratory learning | Exploitative Learning |
| individual | March [1] | Learning behaviours described in terms of search, adventure, experiment, experiment, innovation, etc. | Learning behaviours described in terms of refinement, efficiency, choice, execution, etc. |
| | Mom [4] | The possibility of finding new products, new services and new markets requires new technologies and knowledge | Serving existing customers with existing products and services requires the accumulation of existing knowledge and experience |
| team | Perretti [2] | Hire new employees to integrate old and new knowledge | Integrate old knowledge, reuse existing knowledge and use experience |
| | Yunjiang [5] | Discovery, acquisition and update of new knowledge outside of work | Use, deepen and refine knowledge in one's own work |
| organization | Danneels [6] | Develop new technologies to serve new customers | Strengthen existing technology to serve existing customers |
| | Zhu Zhaohui [3] | Experiment in new areas | Improvement and expansion of existing capabilities, technologies and paradigms |

3. Measurement of Ambidextrous Learning

Scholars at home and abroad have developed corresponding scales for exploratory learning and exploitative learning, but their internal structure is no longer subdivided. See Table 2 for details.

Table2: Measurement Scale for ambidextrous Learning.

| Scholar | Time | Scale |
|--------------------|------|--|
| March [1] | 1991 | 8 items, 4 items each for exploratory and exploitative learning |
| Katila & Ahuja [7] | 2002 | 8 items, 4 items each for exploratory and exploitative learning |
| He & Wong [8] | 2004 | 10items, 5 items each for exploratory and exploitative learning |
| Atuahene-Gima [9] | 2007 | 10 items, 5 items each for exploratory and exploitative learning |
| Zhu Zhaohui [3] | 2008 | 8 items, 4 items each for exploratory and exploitative learning |
| Chen Guoquan [10] | 2013 | 10 items, 5 items each for exploratory and exploitative learning |

At present, the measurement scale of dual learning is mostly focused on the organization level, and the scale at the individual level is not yet mature, so most scholars apply the dual learning scale at the organizational level to the research at the individual level. In the domestic research, Zhu Zhaohui developed a new scale in exploring the impact of ambidextrous learning on innovation performance [3]. Song Kuntai and Wu Di used this scale to verify it has good reliability and

validity, and can better measure the two learning behaviours of exploratory learning and exploitative learning at the individual level [11,12].

4. Related Research Variables of Ambidextrous Learning

In recent years, ambidextrous learning has been a research hotspot, and domestic scholars have also conducted extensive research on it. In this study, we investigated 149 Chinese documents and 103 foreign literatures about ambidextrous learning in China HowNet, Wanfang, and Weipu by VOSviewer. The analysis was carried out and the research focus was presented using the density view, see Figure 1 and Figure 2 for details.

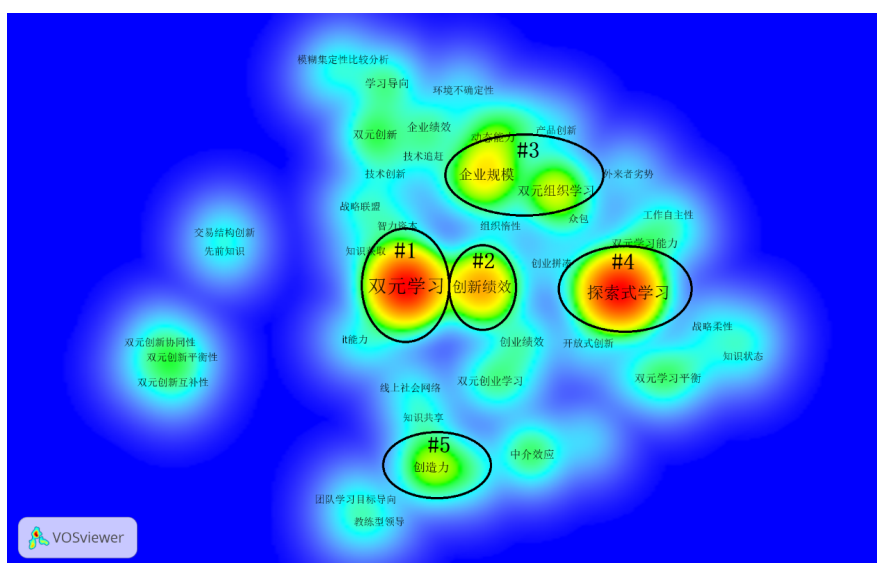


Figure 1: Domestic ambidextrous learning density visualization.

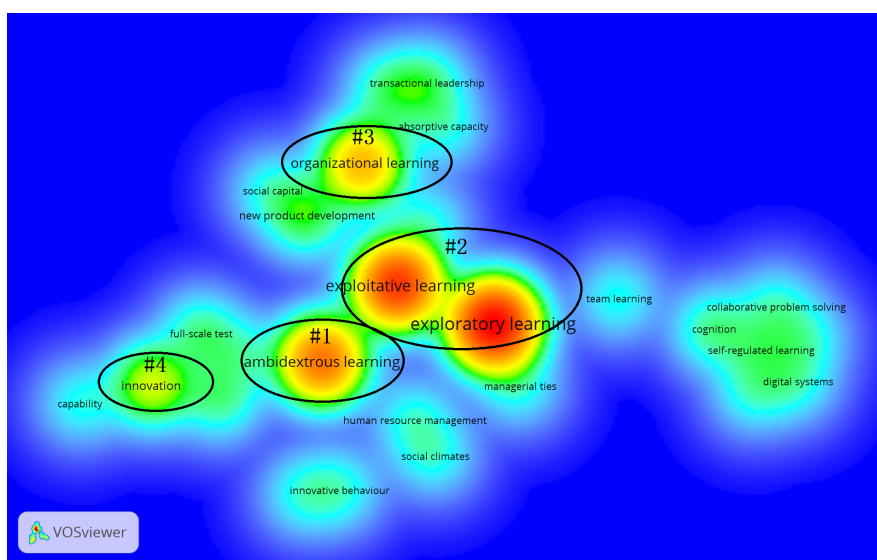


Figure 2: Foreign ambidextrous learning density visualization.

In the density visualization, the map displays red and blue by default. Among them, the more the number of nodes in the domain, the greater the weight, and the colour is closer to red; on the

contrary, the smaller the number of nodes in the domain, the smaller the weight, and the colour is closer to blue. As can be seen from Figures 1 and 2, the domestic research hotspots of ambidextrous learning are mainly distributed in the #1, #2, #3, #4, and #5 regions, and the foreign research hotspots are mainly distributed in #1, #2, #3, and #4 area. Based on the above two figures, it is found that the domestic and foreign research hotspots of ambidextrous learning are roughly divided into 6 aspects. Research hotspots 1: the exploration of dependent variables before ambidextrous learning. Empirical research results show that factors such as corporate culture, leadership style, knowledge ability, and relationships can be used for ambidextrous learning through knowledge acquisition [13], team learning goal orientation [14], and creative will make an impact [11]. Research hot spot 2: Innovation performance. The outcome variables of dual learning are also focused on innovation performance, including organizational-level innovation performance and service innovation performance [13,14]; individual-level innovation performance [12]. Research hotspot 3: ambidextrous organization learning. Some scholars have begun to explore the mechanism of dual learning in different enterprise scales. For example, Cao Liu found through empirical research that intellectual capital in horizontal alliances of small and micro enterprises has a significant impact on product innovation performance through ambidextrous learning [16]. Research hotspot 4: The relationship between exploratory learning and exploitative learning. Scholars have also begun to study the internal relationship of ambidextrous learning, mainly divided into opposing views and balanced views. Research hotspot 5: creativity. Empirical studies have found that ambidextrous learning is positively correlated with team creativity [17] and employee creativity [18]. Research hotspot 6: innovation. Empirical research has found that team ambidextrous learning in the retail service industry can promote team innovation [19].

5. Conclusion

Through combing the existing research literature, it is found that there are large differences in the definition of dual learning at different levels due to different research perspectives. Scholars have not yet reached an agreement on the study of the internal relationship of ambidextrous learning, but over time they have gradually shifted from opposing views to balanced views. In addition, domestic and foreign scholars have no major differences in the research hotspots of dual learning, mainly focusing on the organizational level to explore the antecedent variables of ambidextrous learning, the internal relationship between the two learning methods, and the ambidextrous learning on innovation and creativity. Mechanism of action, etc. This article believes that future research can focus on three aspects: First, the study of the effect of ambidextrous learning at the individual level, breaking the existing organizational level of research. Second, the internal relationship research of ambidextrous learning, through empirical research to further verify the relationship between exploratory learning and exploitative learning. Third, research on the influence mechanism between ambidextrous learning and innovation, and deeply explore the influence path of ambidextrous learning on innovation.

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