

Exploration and Practice of Right-brain Project-based Learning Method: Taking the Book of Songs Culture Project as an Example

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Abstract: In order to deal with the relevant problems highlighted by the traditional project-based learning method in the face of unpredictable project content, unfamiliar learning mode or complex work process re-engineering, the research project of The Communication of Book of Songs Map Culture in Chengdu and relative Cultural and Creative Product Development fully drew on the Split-brain theory and relevant tools of Right-brain Project Management in the implementation process. By mobilizing students' all-round senses and developing their potentials in terms of emotion, intuition and creativity, we optimized their perception of project objectives, connotation and vision in project-based learning, and promoted the transformation of their professional theoretical knowledge into practical results.

Keywords: Project-based teaching and learning method; Right-brain Project Management; College Students' Innovation and Entrepreneurship Project; the Book of Songs Culture

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1. Introduction

Project-based learning method is built based on learner-centered model, which organically combines objectives, actions and results by simulating project development and team cooperation in real environment^[1]. The traditional project-based learning method usually focuses on the use and development of learners' left brain, such as logical-linear processes of reading materials, writing plans, designing time schedules, etc. This left-brain led project learning method has shown obvious advantages when the project team members have worked together and accumulated some tacit understanding, and the content and results of the project are predictable: a harmonious, effective and timely delivery of project advancement and learning atmosphere is perceived. However, if the project involves new content, unfamiliar learning mode or complex workflow re-engineering, and the project members haven't worked together before, the learning method dominated by left-brain thinking mode will be inadequate.

When carrying out College Students' Innovation and Entrepreneurship Project of The Communication of Book of Songs Map Culture in Chengdu and relative Cultural and Creative Product Development, we have used the project-based learning method throughout. In order to solve the problems highlighted by students (hereinafter referred to as learners) when using the traditional method in the face of new content, new environment and new process, we referred to Dr B. Michael Aucoin's Right-brain Project Management theory and applied relevant tools to the process of learners in optimizing project learning methods and improving project learning efficiency. Based on this, we re-examined the difficulties of learners' transformation from students status to project members, their inability to adapt to the complex project development environment and requirements, their lack of communication and the establishment of effective collaborative relationships, along with other issues. Starting with right-brain thinking, we fully mobilized their talents in emotion, intuition and creativity, so that they could apply theoretical knowledge to practice through right-brain project

learning methods.

2. Disadvantages of traditional project-based learning method

When carrying out our project, the traditional project-based learning method has demonstrated certain advantages: when the adviser separated from the role of instructing and retreated to the position of a bystander and supervisor, the learners have successfully converted into project members. When the advisor cooperated with the project members to formulate tasks that were appropriate to the real situation, the problem came, and the learners were trapped by sudden complex problems. The project-based learning method required them to actively react through effective communication and cooperation, and gain knowledge hidden behind the problem, and improve the awareness of autonomous learning and the ability to solve problems. Their identity conversion fell into an awkward situation: on the one hand, the subordinate relationship between members and team leader was challenged in the project-based work. Even if a flat organizational structure was sometimes desirable, cultivating the leadership of team leader was also one of the important objectives of the project. At this time, there were usually two situations that occurred. One was that the team leader insisted on his leading position in the project and continued to give orders to the team members, while the team members responded in a resistance or negative way; The other was that the team leader compromised the sudden confrontation and retreated to the original status of companion or friend. At this time, his leadership effectiveness was reduced to the lowest point, and then a loose, casual and capricious work atmosphere spread in the team. On the other hand, the phased acceptance of the project was delayed. This was because the practice of finding, analyzing and solving problems in the traditional learning paradigm has failed. Facing the unknown project content and creative project achievement requirements, they could not find the correct connection, and the final result was that they could not meet the initial training objectives of the project.

3. Application of right-brain project-based learning method in the project of the Book of Songs Culture

A duel of theory: Left or right hemisphere

For more than a hundred years, people have formed the traditional concept of “left hemisphere is better than the right hemisphere”. Marc Dax, Paul Broca, Carl Wernicke were important discoverers of left brain dominance^[2]. Before Roger Sperry’s Split-brain research, it was widely believed that the left hemisphere had language function and could carry out high-level consciousness activities such as speaking, writing, reading, calculation and logical thinking that the right hemisphere didn’t have, so was considered as an superior brain. Under the long-term domination of this cognition, in educational theory and practice, people tended to pay too much attention to the training of left brain function, such as the cultivation of language and mathematical logic ability, and ignore the development of art and sports^[3].

Sperry carried out his most famous experiment in 1968, named Split-brain experiment to show the independent streams of conscious awareness possessed by each hemisphere and to show how each hemisphere has its own memories. By separating the connection of two sides of the brain, Sperry achieved to prove that the earlier considered “inferior right hemisphere” had much more to do with. After him, researches on the connection between neurology and educational methods have become more and more prosperous, and a large number of applications highlighting the learning function of the right brain have emerged.

Right-brain Learning in Projects: A Complementary Approach

Dr. B. Michael Aucoin believes that facing various challenges in the current project work environment, such as schedule and resources challenges, ambiguous project specifications, dispersed teams, many mid-project scope changes, challenging people issues and so on, traditional project management and learning methods seemed very difficult to carry out. The reason is that habitual left-brain thinking has inherent defects in uncertain and unpredictable events. Dr. Aucoin summarized the classic division of responsibilities and roles of the left and right brain: when the left brain processes logic, facts, analysis and sequential processes, it is basically unable to make decisions based on these facts. Decisions are made in the right brain together with all emotions, concepts and metaphors, the discovery of new patterns and the synthesis of ideas^[4]. As shown in Table 1, the learners in the project team will encounter almost all problems related to the right brain processing. In other words, the reason for their failure in the project learning method directly comes from the lack of right brain utilization. Similarly, when the adviser or project leader encounter the team members’ logic confusion, difficulties in implementing rules, out-of-order operation, inability to implement unfamiliar patterns, etc. in the process of advancing the project, it is difficult for them to realize that this is caused by the lack of right-brain

learning method.

Table 1

Comparison of left and right brain processing information

Left hemisphere	Right hemisphere
Verbal communication by using words	Use vision, space and touch to communicate
Logical thinking	Handle emotions and provide intuition
Tend to enforce familiar rules	Seek new connections and think creatively
Operate in sequence	Excellent in handling irrelevant information
Prefer to predictable behavior	Be good at handling ambiguity
Execute familiar patterns	Learn new and unfamiliar models
Prefer clarifying specific matters	Prefer abstract concepts and metaphors
Operate with complete information	Operate with incomplete information
Fail to make independent decisions	Excellent in making key decisions

Note. From “Right-brain project management: A complementary approach.”,

by B. Michael Aucoin, (2007), *Berrett-Koehler Publishers*.

Based on the above problems mentioned, we focused on trying to break the clear and predictable guidance of the traditional, logical, left-brain-led project learning method, and instead developed the adaptability required for the right brain function to succeed under unpredictable circumstances. Of course, the logic, analysis and calculation in project-based learning couldn't be completely replaced by the right brain. The right-brain learning method here was a positive remedy and expansion method. We have applied the following right-brain learning tools in our project:

3.1 Seek convincing goals and understand the project

When the project team decided to implement a project, learners didn't know what the ultimate goal was. When college students adopted the project-based learning method, the project content was considered as a designed learning template. This directly led to the difficulty of transforming learner status into project member status, because they lacked the core driving force in project work: vision and objectives. The adviser and team leader needed to describe a vision that all members could perceive and understand in a detailed and understandable way: language, words, pictures, sounds, etc. We used the visual, spatial, tactile, emotional and other intuitive feelings familiar to the right brain to describe the final goal of the project and the effect and height that this goal could achieve in terms of its extensibility.

3.2 Create new reality in experiment and adaptation

The adviser and team leader tend to use the traditional project management method to guide the team members to formulate plans and schedules before the project started. In this process, we found that when the path was not clear, it was counterproductive to expect to formulate and follow a detailed plan. On the one hand, during the transition from learner to project member status, the project team members would reject the tension and oppression brought by the detailed plan and time schedule, and the final result would be resistance and avoidance, and this reaction would become more and more intense when the phased results failed to meet the requirements of the plan. On the other hand, when the adviser and the team leader received this kind of resistance and evasion feedback, their enthusiasm to promote the project according to the established path and time was also hit. Our solution was simple: fully allowed experiments to create new connections and possibilities in adaptation. When the right brain's ability to create and process irrelevant information was mobilized, we were surprised to find that the team members found new thinking connections and creativity in an active atmosphere.

3.3 Build and deliver a sense of trust

The learning mode led by the right brain required us to first deal with the emotional needs of learners. When encountering differences and conflicts, listening, expressing understanding, providing empathy and finding solutions could help project members quickly return to positive emotions, and then established a cordial sense of trust. The learners usually showed their inadaptability to the sudden subordination and bureaucracy. Although we actively pursued a flat organizational structure, the lack of trust and emotional connection among the team members made it difficult for them to cooperate. However, the processing of emotional appeals by the right brain could help learners feel the security of personal contributions in free space. During the implementation of the Book of Songs Culture

project, we spent a lot of time communicating, trying to understand and accommodate the behavior of each team member, in order to build enough trust and provide emotional protection for bold and creative actions.

4. Conclusion

In the process of carrying out our project we noticed the difficulty of college students' transformation from learner identity to project member identity in the implementation of traditional project-based learning method. In turn, inspired by the Right-brain Project Management theory of Dr. Michael Aucoin we applied relevant tools to the process of project learning. In the whole process, the adviser played the role of project director and commander in chief, and the team leader acted as the executive director of specific tasks. By seeking convincing common goals and understanding the application of the three tools of creating new reality, establishing and transmitting trust in projects, experiments and adaptation, we have successfully helped learners solve the three major problems of identity transformation dilemma between team leader and team members due to affiliation, unpredictable project results and changing external environment, and reduced creativity caused by the failure of active learning mode. The project-based learning method based on right-brain thinking helped learners remedy the defects of traditional project-based learning method, and stimulated their ability to make key decisions with emotion, intuition and creativity when facing unfamiliar project areas and unrelated information.

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