

Action Learning in Undergraduate Project Team Knowledge Sharing: Features, Functions, and Implementation Paths

Manmei Liao^{1, 2}

¹Youjiang Medical University For Nationalities, Baise, Guangxi, 533000, China

²Philippine Christian University Center for International Education, Manila, 1004, Philippines

Abstract

Project team innovation increasingly relies on adequate knowledge sharing among team members, and action learning can facilitate knowledge sharing, learning, and reflection among team projects. By elaborating the characteristics of action learning for undergraduate project teams in terms of purpose, carrier, center, focus, key, and landing point, this paper proposes that action learning is conducive to guiding the team's purpose orientation, stimulating the team's execution ability, stimulating the team's continuous growth, and promoting the team's knowledge sharing, and discusses that action learning contributes to the knowledge sharing of undergraduate project teams by initiating a vision together, identifying problems, initiating commitment, unifying consensus, consensus strategy, initiating action, and other. Through the steps of visioning, problem identification, active commitment, consensus, consensus strategy, and active action, action learning can help undergraduate project teams to produce the effect of teamwork and promote knowledge sharing among project teams.

Keywords

Action Learning; Knowledge Sharing; Action Reflection; Teams; Undergraduates.

1. Introduction

The production of multidisciplinary cross-fertilization of knowledge is becoming increasingly obvious, and project team innovation increasingly relies on adequate knowledge sharing among team members. Undergraduate project teams are learning and research communities formed spontaneously or led by instructors within colleges and universities, with students as the main body, guided by topics and projects, aiming to develop competence and innovation, and producing innovative results through knowledge sharing[1]. As a team learning approach, many scholars have focused their research on active learning in the areas of team training and development, leadership improvement, and curriculum design. This paper discusses the application of action learning in team knowledge sharing by taking undergraduate project teams as the research object, and explores how the characteristics and roles of action learning can enable team members to work as a group to promote knowledge sharing in project teams as a way to improve the overall team learning performance.

2. Related Concept Elaboration

2.1. Knowledge Sharing

Seviby (1997) argues that "knowledge sharing is the extent to which employees know each other's expertise, experience, skills, values, interpersonal networks, and work processes"[2]. experience, etc., to others with the hope that the other person will have the same knowledge as they do"[3]. Generally speaking, knowledge sharing in undergraduate project teams is a way for team members to disseminate and diffuse their knowledge to share with others. Effective

knowledge sharing not only increases the knowledge accumulation and learning ability of team members, but also improves the overall performance and innovation ability of the team.

2.2. Action Learning

Action Learning (AL) originates from the research of the famous British scholar, Professor Reg Ravens, and its main purpose is to promote a clear understanding of leadership skills by allowing students to participate in real work projects, helping them to respond quickly and effectively to specific changes, and to develop appropriate skills in the process. It emphasizes the opportunity to learn in real-life situations dealing with problems and can usually be summarized by the formula $AL = P + Q + R + I$ (i.e. Action Learning = Structured Knowledge + Questioning + Reflection + Implementation). Action learning has been widely applied in practice in enterprises, especially in the process of creating learning organizations, where entrepreneurs use a group learning approach similar to action learning to solve problems in their enterprises. Some scholars have studied the application of action learning in human resource development and they consider action learning as one of the organizational factors that influence the impact of team knowledge sharing. Ghosia Ahmed studied that action learning can facilitate knowledge sharing, learning, and reflection across team projects [4].

3. Characteristics of Action Learning for Undergraduate Project Teams

3.1. The Purpose of Action Learning: to Improve Team Learning Performance

The core purpose of action learning is to improve team learning performance. With the depth of the action learning project, team members' knowledge and skills shortcomings are supplemented with targeted knowledge based on their performance in the process of problem-solving, and under the pull of the problem, team members' learning initiative will multiply and change from passive learning in the past to active learning, which will lead to the improvement of personal knowledge and skills in practical application. Through the feedback between group members in the action learning process, the effectiveness of behavior is continuously improved, and individual and team effectiveness is enhanced. In the action learning process, questioning and reflection can bring about a fundamental change in the mental model of team members, and learning from a change in a mental model can have a more profound impact on the organization.

3.2. A Vehicle for Action Learning: Solving Complex Problems

Undergraduate project teams encounter a variety of complex problems in the process of innovation and development, and action learning uses the solution of complex problems as a vehicle for team learning and development. The problems referred to here are those that are challenging and present opportunities for group members to develop knowledge, skills, and leadership, and the ultimate solution to such problems must be significant to the individual, the team, and the organization. Therefore, not any difficult problem lends itself to action learning. The knowledge of undergraduate project team members is heterogeneous, and knowledge sharing, mutual facilitation, and learning among members provide effective developmental relationships among team members, and the knowledge and skills needed to supplement the action learning process based on problem-solving sublimate the value of heterogeneous team knowledge sharing behaviors.

3.3. The Heart of Action Learning: Developing Knowledge-Sharing Teams

College student project teams are both problem solvers and objects to be developed at the same time. Team members usually come from different disciplines and majors, and the diversity of their backgrounds reflects the democracy, openness, and inclusiveness of action learning, which helps to develop different perspectives in the discussion process. The application of

learning actions, through a series of steps such as clarifying problems, setting goals, analyzing problems, finding solutions, evaluating and selecting solutions, and driving solutions to the ground for implementation, naturally means that knowledge sharing behaviors are developed in the project team when challenging challenges beyond the current capabilities of team members are overcome. Action learning centers on the development of knowledge sharing teams as the center of problem-solving, which both provide diverse perspectives on problem-solving, make problem-solving possible, and create learning opportunities to break through cognitive barriers.

3.4. Action Learning Focus: Promoting Questioning and Reflection

Promoting questioning and reflection is the focus of the action learning process. Through questioning, we can trigger reflection on the nature of the problem and see the problem clearly; through questioning, it is easier to grasp the essence of the problem and obtain targeted solutions by exploring things but not people, so that team members can trust each other more, cooperate more tacitly and unite the team more; through questioning, not only can we understand what causes the problem, but also can let us discover the inappropriate behavior behind the problem, and more importantly, Through questioning, students from different disciplines and majors can communicate openly, stimulate thinking from different perspectives, stimulate thinking from different angles, break the old cognitive paradigm and create a new cognitive paradigm.

3.5. The Key to Action Learning: Leveraging Team Mentors to Facilitate

The role of the undergraduate project team mentor is as critical to the action learning process as that of the facilitator mentioned in other fields of study. Undergraduate project teams are based in universities, and the team members lack experience in project operations and management as students, so they especially need guidance from their mentors during the action learning process. The team mentor focuses on the design of the problem-solving process to make it more efficient; on the team facilitation of the team members in solving the problem to make their cooperation and thinking more effective; and on the paradigm shift of the problem-solving team to make real learning happen. Action learning allows undergraduate students to become the main body of problem-solving through the facilitation of the project instructor, fully activating the wisdom of team members.

3.6. Action Learning Landing Point: Performing Action Verification

Without action, there is no learning, and action learning requires project team members to take action on the problem they are trying to solve. If team instructors simply let team members discuss strategies rather than empowering them to act and practice, project teams, risk losing energy, creativity, and commitment. Therefore, action validation in practice is the landing point for action learning to solve problems and develop learning. As Mintzberg says, action is not learning; reflection on action is learning. Therefore, action validation includes both action and reflection components. It includes both the formulation of problem-solving hypotheses and the eventual creation of a prototype problem-solving solution, which is validated in practice; it also includes reflective summaries based on the actual situation of the prototype validation, and reflective learning while revising the problem-solving hypotheses.

4. The Function of Action Learning in the Knowledge Sharing Process of Undergraduate Project Teams

4.1. Lead the Team's Purpose Orientation

For example, the "Internet "+ Student Innovation and Entrepreneurship Competition is one of the important initiatives to promote mass entrepreneurship and innovation, promote the high-

quality development of higher education, and accelerate the cultivation of innovative and entrepreneurial talents in China. In the process of implementing active learning in the project team formed by this competition, each member is clear about the assumptions behind the goal, each member is clear about the meaning of reaching the goal, and each member is the active implementer of the goal rather than the passive recipient. Clear, committed goals create a strong tension in each participant and inspire team members to work hard around a common goal.

4.2. Motivating the Team to Execute

The most important thing in the process of action learning is challenging tasks. The total cooperative project of the project team is a big challenging task, and this big challenging task is decomposed into different challenging tasks in different stages through each stage of the dynamic learning plan, which is like the constant fighting and upgrading in the game and can fully stimulate the sense of human ability. The "Internet+" Student Innovation and Entrepreneurship Competition, as an important tool to deepen the reform of innovation and entrepreneurship education, adopts a three-level competition system of school-level competition, provincial competition, and national competition. According to the requirements of the provincial education department on the participation rate and the number of projects, as well as the number of registered projects as the base at a ratio of 50:1, the number of entries into the provincial competition is allocated. According to the rule of "Internet+", all universities in China are strengthening the assessment of the participation of "Internet+" college students' innovation and entrepreneurship competition, and the completion of the participation index and the award will be taken as an important index in the evaluation of employment and entrepreneurship work.

4.3. Motivating the Continuous Growth of the Team

Reflection is an important means of action learning project promotion. Through continuous reflection, team members are very clear about the achievement of goals and what actions are effective and promote the achievement of goals, and what actions are ineffective and need to be adjusted and improved, which can stimulate the sense of human progress. The "Internet+" Student Innovation and Entrepreneurship Competition provides a real team learning environment for undergraduate students to achieve both organizational goals and personal competence quality through the learning cycle of learning, action, reflection, and action again [5], and stimulates the team to grow continuously.

4.4. Facilitate Knowledge Sharing among the Team

When the project team members participate in the competition, they should not only consider the theoretical knowledge but also think about the practical application of the situation. Knowledge sharing plays a great role in this series of situations, which can promote the members to continuously discover and improve the project, cultivate the overall research ability and innovation consciousness of students, and lay a solid foundation for their future employment. In action learning, each member is an equal and voluntary participant, the goals of action learning are committed by the students on their initiative, the tasks in the action learning process are undertaken by the students on their initiative, and the rules of the action learning team are also set by the students on their initiative. The team members have high trust, a strong willingness to cooperate, and a good environment for knowledge sharing is created, so that close knowledge sharing is carried out through action learning, thus building a good foundation for team development and promoting knowledge sharing.

5. Pathways for Action Learning to Enable Undergraduate Project Teams to Work Together as a Team

5.1. Unifying Thoughts and Starting a Vision Together

The target tasks of project teams are often laid out from the top down, and college students who do not form a common will in carrying out their tasks naturally cannot gain broad commitment. Therefore, project teams need members to think together in this session to paint a picture of the success of the project and elaborate on various incentive policies including financial support for the competition, credit awards, etc., to fully stimulate human emotions to unify thoughts and stimulate the will to act.

5.2. Analyze the Current Situation and Identify Problems

There are differences in the discipline culture and thinking habits of project team members, and they may act, they can act hastily because they do not have a unified cognition of the current situation of the target task, so they work separately in the auction process and cannot form an effective synergy. Therefore, the project team should first focus on the knowledge training of team members, develop the knowledge field of team members, and enhance the knowledge sharing awareness of team members. On this basis, the team members should do a SWOT analysis of the project or topic together, to form a consensus on the most important problems faced by the project or topic, such as the possible lack of distinctive features of the project.

5.3. Division of Labor and Proactive Commitment

Undergraduate project teams are relatively loose compared to social project teams, and there is a possibility that some team members may give up their participation in the project due to the pressure of their studies or other tasks, thus leading to the instability of the team structure. Therefore, the project team needs to decompose the core tasks of the project, clarify the responsibilities of each team member, and set up a proactive commitment process, the most important purpose of which is to transform the team from "passive" to "proactive".

5.4. Knowledge Sharing and Unified Consensus

When a project team is searching for a strategy to accomplish a task goal, the "consensus" of team members is often more important than the "right" strategy. A correct action strategy that has not gained consensus cannot be validated effectively if it does not commit team members from the beginning; while a consensus action strategy, even if it is not perfect at the beginning, will be corrected during implementation due to the commitment of team members. team members will correct it independently in the process of implementation, and then repeat the cycle to achieve the expected results. So in this session, the core of the project team's action strategy is to achieve a broad consensus rather than dwell on whether it is necessarily effective.

5.5. Brainstorming and Consensus Strategies

There is a Chinese saying that "plans are not as fast as changes". The key to brainstorming is to transfer and exchange knowledge among team members, so the project team should develop a "foolproof" action plan in this aspect, presenting all the actions needed to carry out the action strategy. All the actions needed to carry out the action strategy are presented, so that the action plan is truly implementable and trackable.

5.6. Take the Initiative and Act Proactively

The learning action model transforms the undergraduate student into an active party who decides what to do, while the project instructor becomes an advisor who questions and advises the student on the action plan. In this process, the role of the project instructor should change

from the traditional "giving instructions" to "questioning and advising", and from the traditional "obedience" to "active responsibility". "These are the key points of the session.

6. Conclusion

Chinese universities are deeply promoting mass entrepreneurship and innovation, promoting high-quality development of higher education, and accelerating the cultivation of innovative and entrepreneurial talents. In February 2020, the expert working group of the "Study on Competition Evaluation and Management System of Colleges and Universities" of the Chinese Society of Higher Education released the "Ranking of Collegiate Competitions 2015-2019", and among the 44 competitions included in the ranking "Internet+" college students' innovation and entrepreneurship, competition was listed in the 1st place. With the advancement of this competition program, knowledge exchange and sharing are particularly important for heterogeneous undergraduate project team building. Action learning is a comprehensive learning model that integrates knowledge, experience, team learning, and exploratory problem-solving. In advancing the project implementation process, action learning can facilitate knowledge sharing, learning, and reflection among team members, which in turn can enhance the team's learning performance.

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