

Research on the Construction Mode of Excellent Teaching Team in Colleges and Universities

Xiaomei Hu¹, Hui Li^{1,*}, Zejiang Zhou²

¹School of Management Science and Engineering, Anhui University of Finance and Economics, Bengbu, Anhui, China

²School of Economics, Anhui University of Finance and Economics, Bengbu, Anhui, China

*lihuianny@126.com

Abstract

Starting from the role of teaching teams in colleges and universities, this paper analyzes the main problems in the construction of teaching teams in terms of team structure, cooperation mechanism, development planning, performance appraisal mechanism, and puts forward multiple construction models and operation management methods for constructing excellent teaching teams in terms of constructing three-level and six category teaching teams, constructing virtual teaching teams, and constructing double qualified teaching teams.

Keywords

Teaching Team; Construction Mode; PDCA.

1. Introduction

The teaching team is an innovative basic teaching organization, which is mainly composed of a number of teacher echelons with complementary ages, skills and knowledge, takes the reform of teaching content and teaching methods as the main way, takes the construction of a series of courses and specialties as the platform, strengthens communication and cooperation, and aims to improve teachers' teaching level and education quality. The purpose of teaching team is to improve teachers' teaching level by establishing team cooperation mechanism, reforming teaching content and methods, developing teaching resources, promoting teaching discussion and teaching experience exchange. The establishment of the teaching team has played a significant positive role in improving the level of professional development of the discipline, meeting the comprehensive needs of the discipline, optimizing teaching resources, cultivating students' comprehensive application ability and innovation ability, comprehensively improving the overall teaching level of the teaching team, cultivating a sustainable development of the teaching team and improving the quality of education and teaching. According to the requirements of the project of "teaching team and high-level teacher team construction" launched by the Ministry of Education, the characteristics and functions of the teaching team are as follows: the team members have a scientific and reasonable structure, can effectively develop and use teaching resources, promote teaching discussion and exchange of teaching experience, has an efficient team cooperation mechanism, is conducive to the training of young teachers, can promote the combination of old, middle-aged and young in teaching work, and fully carry forward the role of mentoring, It can promote the teaching level and quality. However, due to the fact that colleges and universities did not create teaching teams according to the actual situation, could not meet the basic elements of teaching teams, and did not have a good cooperation mechanism, there are still many problems in creating teaching teams. The disciplines and specialties in colleges and universities are diverse and complex in layout. At the same time, each university has different strengths and focuses on different disciplines. In order

to promote exchanges and complementarities among disciplines, in building an excellent teaching team in colleges and universities, we should not only consider interdisciplinary integration, but also consider building a teaching team across schools, giving full play to high-quality teaching resources both inside and outside the school. The main goal of an excellent teaching team is to promote the construction of courses and specialties, thereby improving the teaching and research ability and the overall school running level of colleges and universities, and ultimately enhancing the professional competitiveness and talent training ability of colleges and universities.

2. Main Problems in the Construction of College Teaching Team

2.1. Unreasonable Team Structure

The structure of teaching team in colleges and universities mainly involves the age structure, teaching age structure, professional title structure, educational background structure and academic background structure of team members, which affect the vitality and development potential of teaching team and are the premise to ensure the continuity of teaching work. With the deepening of education in China, it is still the main factor that restricts the team in terms of professional titles, teaching years and academic qualifications. The problems mainly focus on the aging of age, the unreasonable mix of old, middle-aged and young people, the strong administrative tendency of team leaders, and the "inbreeding" caused by the unreasonable academic structure, which are not conducive to the exchange and complementarity of teaching ideas in different disciplines. Personal expertise and various academic research directions are difficult to support the development of the whole discipline. Some members do not have a clear understanding of the team's development goals and direction, lack a sense of identity with their teams, and have serious utilitarian thoughts about the tasks they undertake. The development of teaching teams requires both excellent leaders and members with scientific and reasonable structure. An excellent team should have members with different ages, personalities and specialties in their respective fields, give full play to the complementary advantages of members' knowledge, abilities, research experience, etc., and work together to undertake certain tasks. Members of the team keep knowledge sharing and information open, and constantly exchange knowledge and information among members, as well as with the team and the outside world, so as to promote the dynamic and sustainable development of the team.

2.2. The Team Lacks Efficient Cooperation Mechanism

At present, some colleges and universities do not consider how to create a good team atmosphere, how to provide a platform for teaching communication for team members, how to promote team members to unite, help each other, and work together, because under the domination of the academic freedom of university autonomy, teachers lack the sense of team cooperation. For a long time, the working style of college teachers has been isolated and closed. Teachers are conservative, isolated and on guard against each other. Even if problems and difficulties arise in teaching, they do not communicate, and there is no cooperative research at all. In daily teaching activities, teachers are basically alone in the face of specific educational situations, lacking the atmosphere of cooperation and communication between teachers, and can not talk about cooperative research at all. If there is no communication and harmonious organizational atmosphere, interpersonal relationship and innovative ideas inside and outside the team, Member 8 cannot strive for more resources and development guarantees for the team. Excellent teams can communicate with each other in the following forms: exchanging and sharing information through files, emails, networks, etc; The team members can also get together to communicate face to face, speak freely about a problem and express their own opinions, so that the views of members continue to impact each other in the discussion, and

finally the views are improved. In addition, internal and external academic exchanges also include cooperation, exchange and learning between brother colleges and universities, holding various teaching and academic exchange seminars and other forms. Flexible, efficient and perfect internal and external communication mechanism will certainly promote the rapid growth of teaching team members.

2.3. Unclear Team Development Plan and Objectives

The focus of teaching team building in many colleges and universities is not to develop feasible measures around the development plan and team goals, create conditions, provide support and services for team building, create a good construction environment for it, and focus on optimizing the construction of teachers and improving the quality of talent training. There are many reasons for this, among which the team has no common development plan and clear development goals, leading team members to ignore the effectiveness of the team, while leaders and members are busy with their own personal scientific research and self-development. The common goal is one of the characteristics of an excellent teaching team, and it is the driving force and direction for team members to work hard. At present, many team members have very low participation in setting goals. They do not understand the team goals, nor do they know how to combine their career plans or personal goals with the team goals. They do not have the sense of belonging and superiority that the team should have, nor do they associate their development with the team, but simply complete the tasks assigned by their superiors. The construction of teaching teams in colleges and universities is more focused on improving the overall teaching level of each major and the school, improving the quality of talent training and training, and cultivating high-level teachers. The results are invisible and intangible, and the effective period is long, so everyone is unwilling to invest too much.

2.4. Incomplete Team Performance Appraisal Mechanism

At this stage, there is a serious situation of "focusing on the results rather than the process" in the performance evaluation of the teaching team. The performance evaluation of the teaching team only focuses on the evaluation of the results and performance, and a series of important indicators reflecting the team's operation and development process, such as the process of the team leader, the development of the team's development potential, the improvement of the team members' personal ability, whether the team has centripetal force Whether the team members cooperate closely or not is rarely involved. This assessment orientation, to a certain extent, reduces the enthusiasm of team members to engage in long-term and basic teaching work and discipline construction, and is not conducive to comprehensively and reasonably measuring team performance and sustainable development of the team. The performance appraisal is a means to test the phased achievements of the teaching team in colleges and universities. It is the affirmation of the achievements and the revelation of the shortcomings, and the basis for the development and improvement of the teaching team. Therefore, we should fully recognize the importance of the team performance appraisal mechanism, and formulate a reasonable performance evaluation index system for college teaching teams based on its long cycle characteristics. Build a comprehensive evaluation model to minimize the human factors in the performance evaluation process and maximize its objectivity. At the same time, the institutionalized performance feedback mechanism can be set up to check the assessment results by means of informal discussion, discussion, individual interview, etc., to ensure the fairness and justice of the performance results and give play to the effect of performance assessment, which plays a vital role in promoting the development and improvement of the level of the teaching team in colleges and universities.

3. Multiple Construction Models of Excellent Teaching Teams

The teaching team has been initially built in China, but there are few really excellent teaching teams. How to build an excellent teaching team is still an important topic. The article studies the construction mode of excellent teaching teams from the following aspects.

3.1. Structure of Three Levels and Six Types of Teaching Teams

The teaching team of colleges and universities is mainly formed to complete the teaching task of a series of courses or a course. From the current situation of our country's colleges and universities, we generally build "three levels and six categories" teaching teams. The "three levels" are as follows: (1) School level teaching team. The teaching team built on the platform of the school meets the requirements and standards of the school. The excellent school level teaching team is the teaching team that serves as a model in the whole school. (2) Provincial teaching team. The teaching team that meets the provincial requirements, and the excellent provincial teaching team is regarded as the provincial demonstration teaching team. (3) National teaching team. The excellent national teaching team is a teaching team that can meet the national requirements. The "six categories" are as follows: (1) The teaching team with the core of the general education stage platform curriculum at the school level. (2) A teaching team with the core of discipline foundation or professional courses (groups). (3) A teaching team with experimental and practical teaching links (practical teaching, discipline competition, etc.) as the core. (4) A teaching team focusing on the construction and implementation of comprehensive cross curriculums. (5) The teaching team combines theoretical courses with practical courses. (6) The teaching team of Chinese foreign cooperatively run courses. Through investigation, it is found that the number of teaching teams focusing on experimental and practical teaching links and the construction and implementation of comprehensive cross curriculums is very small. At present, many teaching teams in China are still limited to one course or one major. Teachers from different disciplines and majors or different research directions form a teaching team, jointly open a course, and there are relatively few teaching teams to complete teaching tasks cooperatively, however, with the constant integration and differentiation of science and technology, and the constant updating of teaching content, such a team is a development trend of future teaching.

In general, the team structure of excellent teaching teams is designed as follows: (1) Team size. Ideally, the team size should be 7-9 people. Generally speaking, the most effective team size should not exceed 10 people. Experts suggest that the minimum number of people should be used when the task can be completed. Therefore, when designing an efficient team, the number of managers should not exceed 10. If there are too many people in the natural work unit, a group should be divided into several sub teams. Based on the above point of view, the size of the teaching team should refer to the experience of team size in management and be determined according to the actual needs. Generally, there are 1 academic leader, 3-6 teaching and research backbone (backbone) personnel, 5-8 young teachers, 1-2 service personnel, and the total number is about 10. (2) Personnel structure. A complete teaching team is composed of many people with different personality characteristics. The study found that personality is related to team effectiveness. Specifically, for teams with high scores on extraversion, easy-going, responsibility and emotional stability, the management also tends to have higher scores on team performance evaluation. In terms of the composition of teaching team members, there are moderate differences in skills, personality and temperament among team members. Such a team can optimize the combination, concentrate its advantages and form the best ability structure. From a vertical perspective, the more non top talents in the team, the better. If the academic elites are organized in a team, the results do not meet our expectations. Generally, the "pyramid" structure is considered reasonable. The old, the middle and the young are matched

with each other. Through helping, guiding and spreading, young teachers can quickly grow up to adapt to teaching, and strive to lead a group of young teachers, unite a group of academic backbones, and build a team full of cohesion and combat effectiveness. This can not only improve the teaching quality, but also improve the overall faculty of colleges and universities. (3) Age hierarchy. The differences among teaching team members are also reflected in the age hierarchy. Because university disciplines have the characteristics of knowledge production, transmission and reproduction, which is an unavoidable cycle law of the university itself. To achieve this goal, the formation of a team of teachers must have the level of age. At the same time, teachers with deep academic attainments and rich teaching experience are gradually cultivated through many years of teaching practice and academic research. This part of rich teacher resources is limited in every university. To make full use of this part of resources, it is necessary to carry out reasonable resource integration. They can help young teachers who lack work experience, but are ambitious and ambitious. They can help young teachers who just enter colleges and universities to pass the teaching, research and practice tests, and help experienced and active backbone teachers create good teaching, research and academic conditions, To enable them to achieve more results early, we should give full play to their role of "spreading, helping and leading", especially in talent discovery, talent training and talent utilization.

3.2. Build a Virtual Teaching Team

With the continuous development of modern communication technology, teachers' teaching teams can use the network to expand the boundaries of the team. Through remote technology, teachers from different regions but with common goals can be connected. To build a virtual team in cyberspace, teaching teams built in the virtual network world should also have their own organizational culture and system construction. With the development of modern science and technology becoming more and more detailed, knowledge is being updated more and more quickly, and the society has higher and higher requirements for undergraduates, which requires teachers to work together to cope with the diversified teaching process and the ever-changing science and technology. The advantage of colleges and universities is that they have gathered a large number of professional talents in a limited space. However, the current management has divided these excellent talents one by one. The complexity of current scientific research projects has exceeded the limitations of individuals and majors. Therefore, it is necessary to break the limitations of colleges and departments and majors, even those of schools, regions and countries, to form a free combination of scientific research and teaching atmosphere, In this way, the overall force of the team can achieve the effect that one plus one is greater than two. At the same time, through knowledge sharing, information sharing, and good experience of excellent members, they can quickly be promoted and shared in the digital management network to achieve complementary advantages and effective cooperation. On the other hand, it has cost advantages, which can reduce office expenses, travel expenses, and even management costs. Members can directly cooperate and communicate online, for example, through broadband, videophone conference system, e-mail and other communication methods. Therefore, the virtual teaching team is a team that organizes geographically and organizationally dispersed teachers around the goal of curriculum teaching through long-distance communication and information technology.

From the perspective of team members, it can be divided into two types: closed type and open type. The so-called closed virtual teaching team mainly refers to that the team members have a certain range and are fixed. The open virtual teaching team means that there is no limit to its members. As long as they are interested in the teaching goals or curriculum reform goals, they can join or exit at any time. The closed virtual teaching team is similar to the traditional teaching team, but the difference is that the membership relationship between the members is not so strong, and the members are separated by time and space. No matter which of the above two

kinds of virtual teams, their staff concentration is far lower than that of traditional teams based on non information communication forms. The construction of the virtual teaching team is to meet the needs of the school to better conduct scientific research and cultivate talents, which is the fundamental purpose and essential feature of its establishment. It is opposed to the practice of establishing such a team solely for the purpose of establishing a virtual teaching team. After all, there are many aspects that cannot replace traditional teams. For example, it is impossible to reproduce the listening and speaking interaction process in formal face-to-face communication, and provide more meaningful paraverbal clues (intonation, voice fluctuation, volume) and nonverbal clues (eye movements, facial expressions, gestures, and other body languages) in "online interaction", which do not exist, lack loyalty, management and coordination difficulties.

3.3. Building a Double Qualified Teaching Team

The core of the construction of a double qualified teaching team is the construction of a teaching team with "double qualified" quality and "double qualified" structure. The main way of construction is the introduction and training of talents. In terms of talent team construction, adhere to the principle of "recruiting famous teachers, cultivating backbone, school enterprise cooperation, and combination of full-time and part-time", and broaden the source of excellent talents. In terms of building a "double division" team, To build a team of teachers with the quality of "double teachers" and the structure of "double teachers", we will take measures such as "introducing, hiring, sending, sending, and guiding" and "mutual employment and two-way communication" between full-time teachers and part-time teachers of enterprises. "Introducing" means that the college introduces excellent front-line management personnel from enterprises to take on the teaching of professional courses and practical courses, and increases the efforts to introduce teachers through the establishment of teacher reward funds According to the specialty of the course and the particularity of the required skill level, enterprises, industry experts and technicians are employed as part-time teachers to give lectures, establish stable teaching contacts, and make full use of social human resources. "Sending" is to select some key teachers with weak theory but strong practical ability to go to key colleges and universities for further study, study for degrees, and improve their comprehensive quality. "The "lower level" is to let backbone teachers be transferred to grass-roots units, such as internal and external training bases and relevant enterprises, for temporary training, so as to enrich and improve their practical knowledge and skills. "Leading" means leading the new with the old and helping the weak with the strong. Key support and training will be given to discipline leaders and key teachers. We will make them mentors of young and middle-aged teachers, and regularly carry out training in practice, practical training, curriculum construction, academia and other aspects, so as to improve the teaching level of young and middle-aged teachers and their scientific research ability to serve the society.

4. PDCA Method Introduces Excellent Teaching Team Management

4.1. Basic Theory of PDCA

PDCA, also known as Deming cycle, is one of the basic methods commonly used in process management. It was originally derived from Shewhart's ideas and was re mentioned and used by Deming, an American quality management expert in the middle of the 20th century. PDCA is divided into four links: Plan, Do, Check, and Action. It is a universal method that is applicable to all types of organizational activities. PDCA method mainly has the following two characteristics: first, the big ring drives the small ring, and the small ring pulls the big ring. Any organization, that is, a big PDCA cycle, is composed of several subsystems. Each subsystem can form a PDCA cycle of the next level. These subsystems strive to optimize their work and cooperate closely

with each other to optimize the whole system. Second, PDCA cycle is not a single cycle process, but a step up process. When a PDCA cycle is completed and some problems are solved, its successful experience can be standardized and promoted after institutionalization. However, there are still some remaining problems or new problems arising from the new cycle. New plans will be made according to these problems to be solved, and the new PDCA cycle will continue at a higher level, and it will start again and again, rising in a ladder fashion.

PDCA cycle method (Deming cycle) is the basic working method of process management. P, D, C and A correspond to four stages: Plan, Do, Check and Action. The following is an introduction to the specific processes of the four stages. (1) Plan (A). Planning is to set goals and plan the implementation of goals. The plan includes the following four steps. First, analyze the current situation and find out the problem. The second step is to analyze the causes, and the third step is to find out the main influencing factors. The fourth step is to formulate measures to improve quality, propose action plans and predict the effect. (2) Do (D). The implementation of documented procedures is the process of implementing the plan, and the activities in the process can be carried out at this stage; In this process, according to the plan of the previous step, closely surrounding the goal to be achieved, orderly promote the development of all work within the organization system, implement the established measures, and staff perform their duties to achieve the optimal effect. (3) Check (C). Inspection is to measure the output of the process, evaluate whether the process is value-added, and find out whether it is value-added or non value-added. Mainly check the plan and implementation, compare the implementation results with the required goals, analyze the achievements and shortcomings in the organizational work, and provide a reliable basis for the improvement work in the last stage. (4) Action (A). Improvement is to improve the problems found in the inspection, summarize the successful experience in the value-added process, and formulate corresponding standards. For the process without value-added, the problem will be transferred to the next PDCA cycle to solve. It can be seen that there are two types of experience in the cycle process, the first type is excellent experience, which provides a strong guarantee for achieving goals and must be retained as a reference for future organization and operation, which can be called control cycle. The other is to find out the root cause of the problem through a new round of PDCA cycle and reformulate a new action plan for improvement, which is called the improvement cycle.

4.2. Improvement and Application of PDCA Circulation Method in the Operation of Excellent Teaching Teams

4.2.1. Process Planning

Process planning is the planning link, which divides the appropriate process, determines the relationship between processes, clarifies the resource requirements and allocation methods for teaching team activities, determines the activities and methods of the process, and determines the specific connotation of input and output. Dividing the large process of college teaching team into suitable sub processes and determining the main processes, formulating team goals and implementing measures to achieve the goals become the basis for future work in each process. At this stage, the teaching team should understand the original intention of the "quality project" for the construction of the teaching team, follow the educational laws, formulate clear and feasible goals, determine the team organizational structure, resources required by the budget, establish evaluation and assessment indicators, and build a scientific incentive mechanism for the teaching team according to the requirements of the education authorities, universities and the team's own demands, and form documents.

4.2.2. Process Implementation

In this stage, according to the process plan, the specific implementation plan through process control is to follow the teaching team objectives, take effective measures and methods to

control the activities of the teaching team, and run the entire teaching team, which is the core stage of teaching team process management. Specifically, the various resources for the development team operation are mainly funds, and the reasonable design of the organizational structure of the teaching team is to control the team size, coordinate the relationship between members, and assign the rights and responsibilities of team members; Organize team activities, and then evaluate and motivate the teaching team according to the teaching team rating system and incentive mechanism. The effect of this process is crucial for the team to form a benign operation mechanism.

4.2.3. Check

The inspection link of process management is to measure the achievements of the teaching team, that is, the process output, and evaluate it. At this stage, the work of teaching team shall be checked and accepted. A perfect supervision and evaluation system is an important means of teaching team quality monitoring, and is also a necessary condition for the work of teaching team to be checked and accepted. The work in this stage mainly includes: the teaching team must evaluate and accept the team's work achievements by taking the set goals as the standard and using a perfect monitoring system; By using the information feedback system, we can find out the problems in the operation of the teaching team, including internal and external problems. These are the bottleneck processes in the operation of the teaching team in colleges and universities, which need to be improved.

4.2.4. Process Improvement

The change stage is the disposal stage of process management. This stage is mainly aimed at improving the internal organizational structure of the teaching team, the unclear organizational goals of the teaching team, the ineffective organization of teaching team activities, the unreasonable allocation and use of teaching team funds, the lack of team spirit, the unscientific performance evaluation, the imperfect incentive mechanism and other problems that occurred in the above inspections, and institutionalizing the excellent experience of the teaching team, standardize for long-term use. For the above bottleneck problems in the teaching team, new methods and means should be used to intervene and enter the PDCA cycle of new team operation and improvement. The purpose is to make the future development of the teaching team not deviate from the goal of improving teaching quality, improve its own process management ability and ensure the stability of the teaching team's operation, and ensure the benign operation of the teaching team by timely finding out the bottleneck process and improving the process management.

4.3. PDCA Cycle Drives Continuous Improvement of Teaching Team

Adhere to the concept of teaching center in the work of colleges and universities, and the construction of excellent teaching teams is cyclical, mostly 3-5 years as a cycle. Therefore, after the expiration of the construction of excellent teaching teams, it is crucial to maintain the lasting influence of teaching. This requires that the teaching team work should adhere to the concept of teaching center, drive the continuous improvement of college teaching through the PDCA cycle of teaching team work. The school and teaching team should proceed according to their own actual needs, accelerate the transformation of teaching team achievements, improve the transformation rate of achievements, and integrate the experimental conclusions, excellent courses New teaching methods, new teaching methods, new teaching concepts and working methods of teacher cooperation have been applied to teaching for a long time to promote teachers' further specialization, improve teaching quality, and better realize the function of colleges and universities to cultivate talents. In practical work, teaching needs not only research, but also collective reflection on teaching in the form of team work, so as to update teaching ideas, improve teaching methods and means, enrich education and teaching theories,

and promote teachers' effective teaching. The excellent teaching team conducts research on teaching by organizing team activities such as listening to and evaluating lessons, preparing lessons collectively, teaching competitions, academic lectures, visits and practical participation, and shares the new knowledge, new teaching methods and means obtained in the research process. The old, middle and young teachers effectively play the role of mentoring through pairing, and strengthen the academic exchange and interaction between each other in teaching. Good communication not only means good teaching, but also means various excellent academic activities. All academics must become common wealth through communication. In this process, each teacher member of the team has accumulated a lot of teaching theories and practical experience. In practical work, according to teaching and practical needs, they use these theories and experiences to reflect on teaching work and find out the problems, continuously improve and innovate the teaching methods and means, continuously improve the teaching work in colleges and universities, and improve the teaching quality of teams and colleges and universities.

References

- [1] Hong Zhi, Zhong Li Jing. Construction of teaching and research office in university teaching reform [J]. Education Review, 2020 (05).
- [2] Feng Boqin. Building the core competitiveness of teaching teams [J]. China University Teaching, 2011, (9).
- [3] Wu Yang, Liu Jiaqi, Hui Yanan, Qiao Nan. Research on the mechanism of communication management in the process of knowledge transformation of scientific research teams [J]. Scientific Management Research, 2019 (06).
- [4] Chen Chen. The action logic of college teachers' "teaching and research" activities - differentiated selection strategies [J]. Modern University Education, 2020 (01).
- [5] On October 17, the Ministry of Education held a press release in Qingdao on the Implementation Plan for Deepening the Reform of the Construction of the "Double qualified" Teaching Staff of Vocational Education in the New Era [EB/OL]. (October 17, 2019) [http:// www. moe.gov. cn/fbh/ live/2019/51475/mtbd/201910/t20191022_ 404718.html](http://www.moe.gov.cn/fbh/live/2019/51475/mtbd/201910/t20191022_404718.html).