

Design and Implementation of an Internship Program for First-class Undergraduate Majors in Port and Shipping Management

Ming Sun*

College of Transport & Communications
Shanghai Maritime University
Shanghai, China

*Corresponding author

Hailun Jiang

College of Transport & Communications
Shanghai Maritime University
Shanghai, China

Abstract—In the construction of first-class undergraduate majors in Shanghai, the port and shipping management majors of Shanghai Maritime University put a particular emphasis on students' practical knowledge and application skills. Based on characteristics of this kind of majors, this paper analyzes and aims at the top-level design for students' participation in the internship at port and shipping enterprises. Through the implementation of specific internship programs, it shows that the design is reasonable and operable, which is conducive to the realization of cultivation objectives set forth by port and shipping management majors.

Keywords—Port and shipping management majors; Enterprise internship; Internship program

I. INTRODUCTION

Due to objective reasons such as insufficient practical teaching conditions, the major construction and talent cultivation of colleges and universities in China have been plagued. In particular, to cultivate applied talents of characteristic majors, they must change the traditional passive learning mode, carry out multi-level and multi-dimensional practical teaching, and focus on improving students' analytical ability, organizational ability, knowledge processing ability and innovative ability [1]. The Majors Traffic Management (Shipping Management) and Transportation (Port Management) under the College of Transport & Communications (herein after referred to as "the College") of Shanghai Maritime University (herein after referred to as "the University") are both listed in Shanghai's first-class undergraduate majors construction projects. In the process of first-class undergraduate talent cultivation, a "real" internship in port and shipping enterprises, which is characterized by "eating together, living together, learning together, and working together", is an important supplement to the classroom teaching and experimental courses, and is also indispensable for the cultivation of first-class undergraduate talents of port and shipping related characteristics.

II. CHARACTERISTICS OF FIRST-CLASS UNDERGRADUATE TALENT CULTIVATION IN PORT AND SHIPPING MANAGEMENT MAJORS

The first-class undergraduate majors in port and shipping management is committed to cultivating high-level port and shipping management talents with a strong professional background, coordinated development of knowledge, ability and quality, the ability of independent learning, and innovative, competitive and practical skills. It is quite different from those aiming only at students' experience training or experiential learning [2] [3]. In the past decade, even local undergraduate colleges were trying to discuss strategies innovation and the improvement of competitiveness by using organizational management and organizational strategy theory [4].

According to the professional nature and career development needs, the College closely combines the characteristics of each major under the College, and transforms the theoretical knowledge learned on campus into practical ability through the internship of "Eating together, living together, learning together and working together". And it is an important measure for major construction and talent cultivation.

A. The major in port management

The major of Transportation (Port Management) is one of the highlands of Shanghai undergraduate education and has passed the professional certification of engineering education. Graduates are required to be capable of production, operation and operation of port and shipping enterprises to a certain extent, to master the policies and regulations in the port and shipping fields, and to make scientific and reasonable decisions pertinently. Due to the improvement of the world port equipment renewal rate, the management method is more scientific and humanized. Students are required to be more practical during the study in the university. The practical teaching links of this major require 17 courses, totaling 40.5 credits, accounting for 23.89% of the minimum credits for graduation.

Supported by: the 2017 Undergraduate Key Curriculum Construction Project, Shanghai Municipal Education Commission

Based on the needs of cultivating high-quality undergraduate talents, the major of Transportation has established three types of enterprise internships, such as “Navigation Internship”, “Shipyard Internship” and “Port Internship”. Students could get on board the vessel named Yufeng that dedicated to the University’s teaching practice, go to Hudong-Zhonghua Shipbuilding (Group) Co., Ltd. Shanghai, and visit ports in and surrounding Shanghai as well as other enterprises to participate in a 1-2 week internship.

B. The major in shipping management

The major of Traffic Management (Shipping Management) is a national-level characteristic undergraduate major. In 2018, it was rated as a first-class 6-star major by Chinese University Management of Alumni Association. It requires graduates to have a certain degree of comprehensive application of shipping business practices, to master international shipping business and related regulations; to be senior international shipping management talents who are familiar with international trade practice, international maritime policy, international shipping business operation management and international conventions.

Due to the rapid changes in the international situation and the rapid development of modern enterprise operating systems, students of this major are required to receive certain practical trainings both on and off campus.

Based on the characteristics of the major of Shipping Management, the College has formed three major enterprise internships for it, such as “Navigation Internship”, “Transportation & Communications Enterprise Internship” and “Port and Shipping Enterprise Internship”. Students could also get on board the teaching dedicated sea-going vessel named Yufeng, ports and related companies to participate in a 1-2 week internship.

III. DESIGN OF AN INTERNSHIP PROGRAM FOR UNDERGRADUATE MAJORS IN PORT AND SHIPPING MANAGEMENT

In view of the above characteristics of the cultivation of first-class undergraduate talents in port and shipping management, the College has elaborately designed enterprise internship programs. In the process of internship, students’ ability of innovation, besides business procedure and operating skills, should also be cultivated. It is not a process of a quick glance, but to find problems and try to solve problems while following the business tutor to learn and to operate. At present, the College has established a few off-campus internship bases in cities of Changshu, Jiaying, Nantong and Zhangjiagang. Through high-quality classroom teaching and supplemental enterprise internship, the comprehensive quality education for talents in the College will be improved [5]. Figure 1 shows how an internship program in port and shipping management majors is designed and implemented.

A. Building internship bases with a university-enterprise win-win situation and for the cultivation of port and shipping management talents

1) Increase of investment from favorable policies

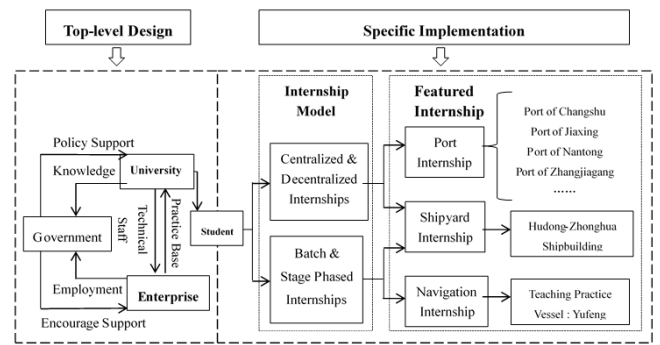


Fig. 1. Design and implementation of an internship program in port and shipping management majors.

Since the classroom teaching and laboratories on campus can’t fully meet the internship needs of students, and the construction of the internship teaching base on campus requires a large amount of capital investment, the practice of student learning is more dependent on the off-campus practice teaching base, that is, the enterprise internship [6]. However, with the expansion of enrollment and the tight teaching budget of the university, the existing internship funds are far from meeting the needs of various internship cultivation. Therefore, it has to compress the duration of the internship, which seriously restricts the construction of the bases and affects the improvement of practical teaching quality [7]. Therefore, the internship mode has been single for many years. Most of them are arranged by one or two teachers. The main nature of the internship is to visit and to recognize, which is often a quick glance. Most of the internship time is spent on the round trip, which is time-consuming and laborious.

After being listed in the first-class undergraduate majors construction projects, Shanghai Maritime University obtained some encouraging funds to design and implement a “real” internship program. In order to cultivate students’ innovative spirit and practical ability, the College not only set up some innovative internship bases for college students, but also actively adopted various measures to closely link university-enterprise relations, with a view to building off-campus internship bases and continuously exerting the educational function of the internship base.

2) Combination of the majors’ construction and enterprise resources utilization

Enterprise internship is an important part of the cultivation of applied talents. It is of positive significance for cultivating students to solve problems and improve their ability to innovate and practice, to contact the society, to experience the workplace, to improve their overall quality and employability [8]. However, as far as the enterprise is concerned, the internship of receiving college students interferes with the normal production activities of the enterprise to some extent, and increases the pressure on the management and safety of the enterprise [9]. And, port, shipping and logistics enterprises have their own objectives [10].

In the early stage, the College has determined to develop various forms of in-depth cooperation and exchange with the

off-campus internship bases through the investigation and negotiation of the College and the off-campus internship bases and signing the framework agreement, etc. In the later period, professors and doctors are organized to provide technical training and lectures to enterprises from time to time; to make research projects for enterprises to solve technical difficulties during internship programs; hire enterprise experts as part-time lecturers to deliver presentations for students or directly teach professional courses in order to enhance the enthusiasm of enterprises to participate in the off-campus internship base. Therefore, the connection and interaction between the College and the enterprise internship base can be improved, a favorable situation of “win-win cooperation” is formed as well.

In addition, combined with professional advantages, it is conducive to strengthening the cultivation of shipping talents by further fully utilizing the advantageous resources of the port and shipping industry and enterprises, and gradually building a sound enterprise internship system [11]. For students from first-class undergraduate majors, the internship to port and shipping enterprises is not just a simple visiting, but an opportunity to discover problems. In the internship, the problem is solved through thinking over and over, so as to cultivate certain abilities to discover problems, analyze problems and to solve problems, which is in line with the objectives of first-class undergraduate talent cultivation.

B. Taking a new internship management model of combining different modes to organize internship students

1) Combination of centralized and decentralized internships

In the “Port Internship” and “Shipyards Internship”, the College has implemented a combination of concentrated internships and decentralized internships.

Concentrated internships include the “Port Internship” project. The centralized internship includes the management of the port enterprises to explain the port machinery types, loading and unloading process and port management business. In the “shipyards internship” project, the engineering and technical personnel of the shipyard will give a unified explain of the contents of the internship, the manufacturing process of various types of ships, and the process characteristics.

Decentralized Internships, for example, in the “Port Internship” project, about 60 students per batch are assigned to 8 subordinate enterprises related to the port, each of which accepts only 10 students per batch.

Through the combination of intensive internship and decentralized internship, the students are assigned to a number of enterprises in the form of an internship group. The corresponding number of students are arranged according to the size of the specific site of the enterprise, and are jointly guided by the field engineers, operators and teachers. The entire off-campus internship, such an internship model not only reduces the burden of corporate guidance, but also improves the efficiency of students’ internships in the enterprise.

2) Combination of batch phased and stage phased internships

Since students’ off-campus internships take up a certain amount of teaching time, the off-campus internships of each major adopt a batch-stage internship mode, which has been considered when the cultivation program is revised. For example, due to the large winds and waves in winter, considering the safety of navigation, “Navigation Internship” is generally arranged in the second semester of the junior year, while “Shipyards Internship” and “Port Internship”, taking into account the relatively fewer courses in the senior year, are arranged in the first semester of the senior year in order to minimize the impact on the general curriculum and to make the curriculum system and internal logic more closely related.

In addition, due to the limited number of students accepted by enterprises, the “Port Internship” project of each major is divided into 2-3 batches, and each batch of students is divided into 7-8 groups for enterprise internship. This batch-by-batch internship mode not only minimizes the impact of the internship program on the theoretical course teaching, but also effectively alleviates the internship pressure caused by the excessive number of students, and also ensures the quality of the student’s internship.

IV. IMPLEMENTATION OF AN INTERNSHIP PROGRAM FOR UNDERGRADUATE MAJORS IN PORT AND SHIPPING MANAGEMENT

After the off-campus internship bases and internship programs are determined, the management of off-campus internship is the key for the program to achieve the predetermined internship effect.

A. Strengthen internship mobilization

Internship mobilization in enterprises is the beginning of the off-campus internship program for students. Due to the personal safety of students is involved in the process of internship in enterprises, internship mobilization mainly emphasizes production safety and security in the process of internship in enterprises, as well as the assessment system.

B. Develop a safety management system

In the process of the internship, a complete set of safety management system should be formed, which involves students' accommodation safety, traffic safety, and enterprise production safety during the internship. During the internship, students should fully understand and implement the safety management system.

C. Make detailed curriculum arrangement plan, schedule and commuting plan

Courses in the college are generally arranged in the previous semester. At this time, it is necessary to negotiate with the internship bases about the students’ internship time and spare the corresponding teaching week when arranging classes, so as to prevent it from influencing the normal teaching order of the College. The port internship schedule should be implemented in advance. In addition, if there is a certain distance between the students’ accommodation and the internship place, they need to communicate with enterprises to arrange vehicles first.

D. Improve staff organization

1) Contact the internship bases

The College arranges a specially-assigned person to be responsible for communication with the off-campus internship bases. Generally, according to the teaching plan, the College will contact the person in charge of the off-campus internship bases one semester in advance to confirm the time and place in the next semester and inform the internship bases to be ready to accept students for internship.

2) Arrange the visiting system for trainee teachers and college leaders

The College generally arranges the internship teachers of enterprises one semester in advance according to the teaching plan, and the teachers need to have a strong sense of responsibility and rich experience of student management experience. For the young teachers without port and shipping education background, a leading internship is also an important way to learn the knowledge of port and shipping management and improve the level of teaching and research.

In order to fully understand the performance of students during their internship in the enterprise and strengthen the relationship between the College and the enterprise, college leaders or responsible personnel need to go to the internship bases once or twice a week to learn about the internship situation, and strengthen cooperation and contact with the enterprises in the internship bases.

V. CONCLUSION

Taking the first-class undergraduate majors construction as an opportunity, with the support of certain encouraging funds, the internship program for students to work in port and shipping enterprises is reconstructed and designed by the College of Transport & Communications, Shanghai Maritime University.

Through combination of the majors' construction and enterprise resources utilization, internship bases are built with a university-enterprise win-win situation and for the benefit of cultivation of port and shipping management talents. For specific internship activities organization, the College sets up a new model by combining centralized and decentralized

internships, and combining batch phased and stage phased internships.

The internship program is implemented by adopting various forms of normalized management, the effect of the internship program for students of port and shipping related majors has been significantly improved.

REFERENCES

- [1] Z. Liu, "Exploration of university-enterprise cooperation talent cultivation mode in local applied undergraduate colleges—taking logistics management major as an example," *Higher Education Exploration*. 2017(03), pp.41-44. (*in Chinese*)
- [2] S. Liu and P. Chen. Adoption of Employment-oriented Experience Training Program to Improve Undergraduates Employment Competence[J]. *International Journal of Modern Education and Computer Science*, 2012, 4(2):52-58.
- [3] Umar Ruhi, "An experiential learning pedagogical framework for enterprise systems education in business colleges," *The International Journal of Management Education*. 2016, 14(2), pp.198-211.
- [4] Y. Zhang and R. Jing. A Study of Improving the Competitiveness of Local Undergraduate Colleges[J]. *International Journal of Education and Management Engineering*. 2012, 2(7):16-21.
- [5] Sun Xuemei, Xue Shiju. Research on Curriculum Design of Higher Vocational Education Based-on QFD[J]. *International Journal of Education and Management Engineering*. 2012, 2(11):24-29.
- [6] M. Huang and F. Cheng, "Practice and thinking on the construction of off-campus practice teaching base for traffic engineering major," *Weekly*. 2019(2), pp.14-16. (*in Chinese*)
- [7] X. Ai, "Problems and reflections on the construction of off-campus internship bases in colleges and universities in the new period," *China Forestry Education*. 2012, 30(1), pp.17-19. (*in Chinese*)
- [8] G. Lu, L. Chen and J. Sun, "Long-term internship: multi-party cooperation and deep interactive education mode," *Advanced Engineering Education Research*. 2014(2), pp.50-56. (*in Chinese*)
- [9] H. Xia and W. Zhang, "Research and practice of off-campus internship base construction based on university-enterprise deep cooperation," *Laboratory Research and Exploration*. 2013(8), pp.419-428. (*in Chinese*)
- [10] J. Hong, Y. Zhang and M. Ding, "Sustainable supply chain management practices, supply chain dynamic capabilities, and enterprise performance," *Journal of Cleaner Production*. 2018, 172(20), pp.3508-3519.
- [11] J. Jiang, "Design and development of virtual understanding practice teaching software for port and shipping management majors," *Marine Education Research*. 2013(3), pp.79-80. (*in Chinese*)