

Construction of a practical teaching system in a management specialty

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ABSTRACT: The aim of practical teaching in higher education is to cultivate college students' operational and creative abilities. Through comparative analysis of the practical teaching of a management specialty in universities in both China and America, the existing problems of practical teaching of a management major in China were analysed. These problems, among others, included the lack of proper objectives and the lack of a proper *scientific* training mode. Using Wuhan University of Science and Technology as an example, a practical teaching system for a management specialty is proposed in this article. The proposed system includes content by level and methods of evaluation.

INTRODUCTION

Practical teaching cultivates students' innovative and practical abilities. Practical teaching is an important part of the validation of theory, both strengthening and expanding the irreplaceable role of theory. The management major has a strong application in business and is a practical discipline, requiring that students not only master the basic theory, methods and skills, it also emphasises the need for students to develop excellent practical skills. This, therefore, shows the importance of practice in a well-designed complete teaching system.

In recent years and through increasing in-depth research, the university's professional training model and programme specifications of the management class have become more sophisticated, with the content of classroom teaching moving gradually towards a more rational and scientific curriculum system. A relatively short time period for development and other issues has resulted in the university's management class professional practical teaching being generally weak.

There are many problems in the practical teaching process, such as the lack of knowledge of the importance of practical teaching; the practical teaching content is too old and narrow; the practical teaching platform, e.g. construction management lags behind and does not match the needs of professional learning and, hence, seriously affects the quality of management training. Consequently, there is growing emphasis on the management class professional practical system in teaching management personnel.

MANAGEMENT PROFESSIONAL PRACTICE TEACHING RESEARCH

In recent years, the requirements of a management major at American universities have generally involved from 180 to 300 hours of study time and include professional practical simulation exercises [1]. The delivery of the course has commonly included class discussion, tutorials, laboratory classes, case studies, scenario simulation, research projects and other class-based, student-centred research activities. With tutors' guidance, students work collaboratively in teams, thereby enhancing their innovative and practical abilities.

The professional construction management class in China is under development and has strong research aspects and provides good opportunities for practical teaching. The management class professional practical teaching requires a practical platform for practical teaching methods with four requirements. These are: the necessity of practical teaching; having scholars with the right talents; subject content; and addressing the drawbacks of the traditional teaching mode.

These were fully discussed and a consensus reached. For the composition of the practical teaching system, scholars believe that, in general, it should include case studies and practical teaching.

Zhao Gongmin pointed out that the practical teaching system should include the structure of the practical teaching, the location, time and the purpose of the teaching. Also included should be course experiments; internships; professional practice; training and production internships; graduation criteria; as well as social impact, consulting services, and so on [2]. Zhang Ruijun has proposed a practical teaching system of a *three-level, eight-module* structure [3]. In the study of a practical teaching system, the social practice and practical sessions are examined. Guwen Yong suggests as good study methods, case discussion and analysis; literature search and thesis writing; social surveys; program design; seniors' input; back-to-school experience-sharing; student lectures as seminars; and study tours [4]. The practical platform has been highlighted in recent years in professional practice teaching and research [5-7]. Higher education workers have generally recognised the need for reform of the practical teaching system, but so far this has not happened

PROBLEMS IN THE PRACTICAL TEACHING OF MANAGEMENT COURSES

Lack of Understanding of the Importance of Practical Teaching

At present, the value of practical teaching has not received enough attention. Management class professional practice teaching has been late in development and the practical content has been added afterwards to the teaching plan. So, the problem lies in the integration of the practical with the theory part of the course. The order of practice and theory may be reversed or be independent of each other. This has a serious impact on students' learning and renders both the practical and theoretical teaching ineffective.

Practical Teaching Mode is *Unscientific*

First, at present, practical teaching consists of a single and centralised programme with fewer hours of practice teaching. Most colleges and university management majors basically follow the traditional training model, which is mainly based on classroom teaching of a theory, supplemented by internships and practical work. The practical teaching is generally just 10 to 20 per cent of total hours, while the proportion of foreign practical teaching is about 35 per cent of total hours. Second, the poor track record of practical teaching and their outdated content do not meet the needs of the community.

Single Objective of Practice Teaching

Colleges and universities usually are positioned as a specific type, such as a research university or application-oriented university. However, in such an overall positioning there is an implementation of practical teaching for all students ignoring individual student requirements. Hence, differences in student potential are not tapped. Currently, many colleges and universities experience this phenomenon, where in the teaching of management class the proportion of validating experiments exceeds by far the more comprehensive experiments or research, and this affects the development of experiments.

BASIC IDEA OF PRACTICE TEACHING REFORMS IN A MANAGEMENT SPECIALTY

The traditional mode of practice teaching is still attached to the theoretical teaching. Practice teaching is not an independent course (ie standalone course) but is just the practical aspects of course requirements. There is a lack of interdisciplinary synthesis and use. Such problems often lead to difficulties in obtaining good teaching results and also may seriously affect the grasp of the core curriculum knowledge.

To address the above issues, in accordance with the management course objectives, combined with the situation of colleges and universities in China, the authors' reform ideas are these: to cultivate and improve students' ability to innovate and to meet the need for different levels of training as reflected in the professional practical courses' integrated design; build a hierarchical, modular course with full use of practice teaching; the practical course content should be made up of easy-to-digest pieces, from simple to complex, from passive to active, and on up to innovative applications with a gradual increase in the depth, breadth and extent of the teaching content.

Taking the school of management in Wuhan University of Science and Technology as an example, the authors construct in this article a practical teaching system in a management specialty.

BUILDING A PRACTICAL TEACHING SYSTEM IN A MANAGEMENT SPECIALTY

The Principle of a Practice Teaching System in a Management Specialty

A practical teaching system must be designed to meet the management class undergraduate curriculum requirements, in line with the needs of the community and management. The following principles should be applied:

1. Targeted. The construction of a practical teaching system by management professionals must comply with the socio-economic requirements of the target culture and pay attention to the cultivation of innovative talents. Modern society demands qualified personnel of good quality, with innovative ability.

2. Systematisation. Universities should understand the composite structure of the course; the need for, and use of, the scientific method within the teaching; the intrinsic link between all aspects of the practice teaching system as they are interrelated and provide continuity throughout the learning process.
3. Overall optimisation. Universities should harmonise the various elements of the practice and teaching activities, and they should harmonise the requirements for the overall quality of students.
4. Standardisation. In the training programme, it is necessary to regulate the practice and form of teaching content, and to develop appropriate evaluation criteria and requirements. Practice teaching should have diverse content, with standardised assessment criteria reflecting differing situations.
5. Theory with practice. A practical teaching system must be established on the basis of theory; if there is no theory to guide practice, then, it becomes *blind* practice. Only under the guidance of educational theory to determine the content of practice teaching, will it be possible to establish a scientific system of practice teaching.

Framework for a Practical Teaching System in a Management Specialty

Practice teaching should be based on the students' ability to assimilate the material at the core of the theoretical teaching, to optimise practices to meet the requirements of integrated management disciplines. According to long-term teaching experience, and as cited by Zhang [3], Guo [6], and Zhong and Zhang [7], a hardware and software platform should be built to support the standardisation of four levels of study. The modules of a practical teaching system, are shown in Figure 1.

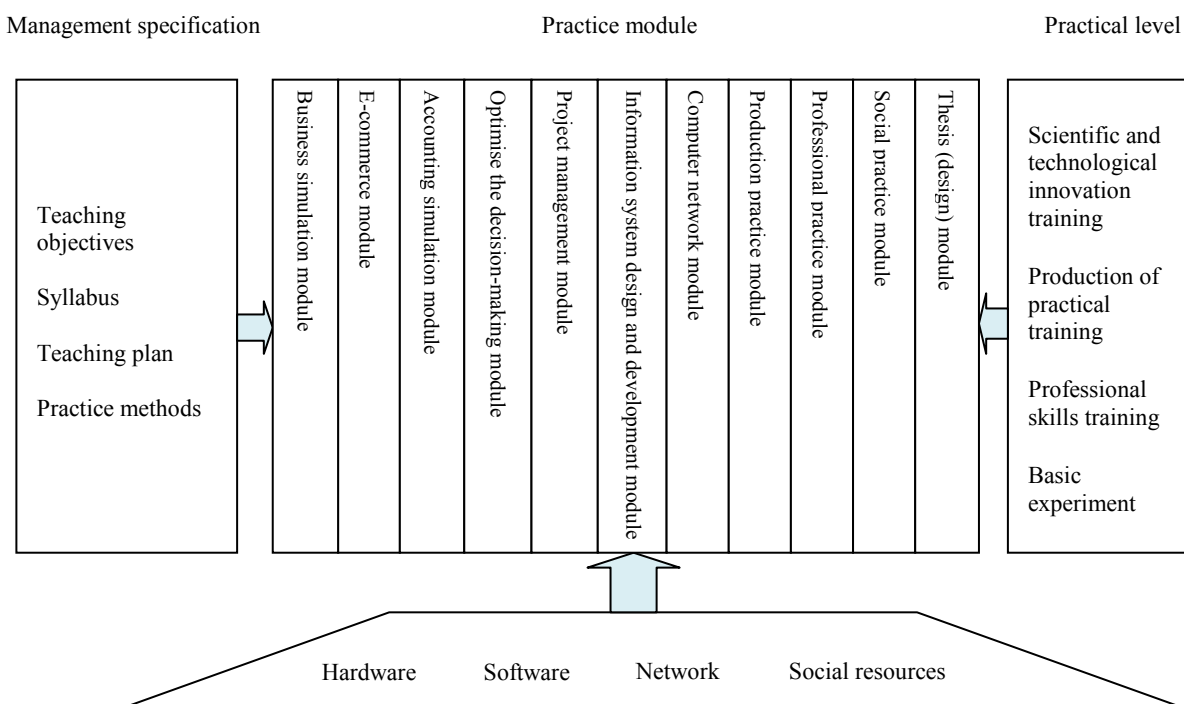


Figure 1: A practical teaching system for a management specialty.

The Four-Level of Practical Teaching System in a Management Specialty

According to the Ministry of Education, constructing a practical teaching system that takes account of the characteristics of a discipline involves: examining and improving the professional skills training; practical training; the training to be scientific and technologically innovative. A four-level, integrated system is shown in Figure 2.

1. The professional basic training level. Professional basic skills-based training requires students to master the basics of professional skills and professional practice skills. These are designed to improve the students' basic skills level. Such practice requirements of the course syllabus curriculum is a complement to the theory, with not less than two-thirds of experiment classes in the course.
2. The professional skills level. Experiment-based professional skills training and the initial training of students in research methods and scientific thinking ability are designed to improve students' comprehensive use of knowledge.
3. Production of practical training. A base in production practice is achieved through internal and external training, as well as improving the capacity and quality of students' application of professional knowledge and skills.
4. Scientific and technological innovation training. This level involves innovative experiments and a thesis mainly to develop a student's sense of innovation by research.

The four levels of practice teaching are covered step-by-step; there is a culture component, and the model is closely integrated to allow students to establish an open mode of thinking and to innovate. Theoretical knowledge and production practices are combined with technological innovation and production practice.

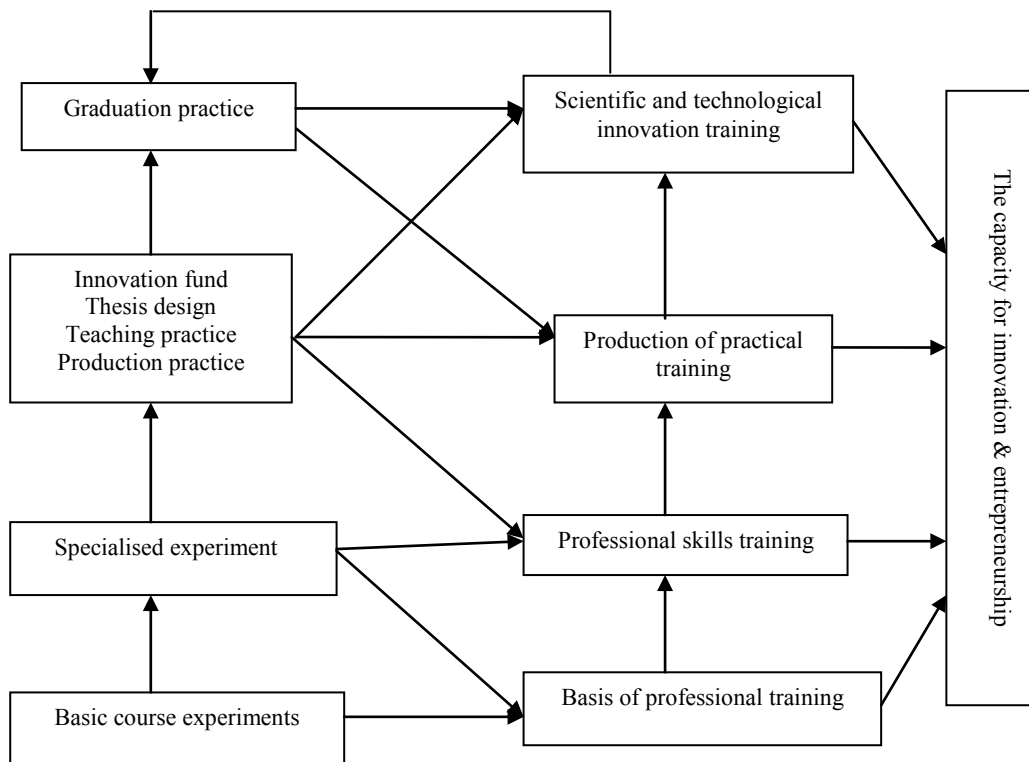


Figure 2: The levels within the management specialty practical teaching system.

Specific Content of Management Class Professional Practice Teaching

As an example of specific content for management class professional practice teaching, Wuhan University of Science and Technology's School of Management is a *four-level, 11-module* practical teaching system, with the following five parts:

- Part one: Practical projects in social activities, including volunteer labour, social surveys, social services, military training, school education, graduate education, reading reports, as well as a variety of community activities, such as activities for college students in the countryside and various arts festivals.
- Part two: This is the course content on experiment teaching; the convergence of theory and practice through experiments, including independent experiments, curricular and extracurricular experiments and hands-on activities, where students design their own comprehensive experiments, and so on.
- Part three: The practice teaching includes various engineering training activities, production practice, professional practice, curriculum design, integrated design and producing a term paper.
- Part four: To graduate, students must produce a thesis, which is the professional research phase of the internship process in the management specialty. This part of the practice teaching has strong theoretical research and practical activities. The graduation project (the thesis) must combine product design, manufacturing and regional economic analysis, with some employment in dealing with practical problems in production to achieve the step process of *production internship - the graduate design - employment line*.
- Part five: The fifth part of the innovative practice includes various *grand prix* scientific research projects, and scientific and technological activities. Students are organised to participate in national and provincial competitions, such as the National Undergraduate Entrepreneurship Competition; the National Undergraduate Marketing Challenge Cup Competition; and the Programming Contest and Web Design Competition. Experience has shown that this type of practical teaching in operation has achieved remarkable results.

Evaluation of Practice Teaching in a Management Specialty

The evaluation of practice teaching includes scientific and general evaluations. Comprehensive feedback provides opportunities to further improve the quality and orientation of the teaching and to further promote the practice. The practice teaching evaluation process begins in the practice teaching unit itself, followed by a phased evaluation and culminating in a total evaluation. Practice teaching evaluation methods will depend upon the nature of the practice. The following methods can be used:

1. Special assessment: Practical teaching requires a higher level of assessment, with a greater concentration of practical activities, such as thesis (design), production activity and curriculum design.
2. Sample survey: This is used for some form of loose, relatively dispersed practical activities, such as a range of community activities, social services and social practice.
3. Statistical analysis: This method can be used for quantitative analysis.
4. Qualitative analysis: For any evaluation where the conclusion is qualitative.

CONCLUSIONS

Management Science and Engineering Teaching reform is a systematic process to better meet the needs of the community of management professionals by improving innovative and practical abilities. Outlined in this article is the present general lack of a professional practice teaching management class. In accordance with the competency-based innovative talents of the management class training objectives, combined with the characteristics of Wuhan University of Science and Technology, this article shows how to build a management professional practice teaching system, and offers a detailed description of that system. The system has been widely used in teaching practice. The system has raised the students' awareness of innovation and improved their practical abilities.

ACKNOWLEDGEMENTS

This work was supported by the teaching Reform of Higher Education of HuBei Province of China (Entrepreneurship education: the constructing of a practical teaching system in management specialty based on corporate behaviour simulation, 2009183), by Wuhan University of Science and Technology teaching rookie, supporting teaching and research project.

REFERENCES

1. Phoebe, N., Practice note: an international dimension in practice teaching. *Inter. Review of Educ.*, 51, **11**, 525-531 (2005).
2. Zhao, G., Study of practice-teaching in the special field of economics and management. *J. of North China University of Science and Technol.*, 20, **2**, 66-67 (2004).
3. Zhang, R. and Deng, X., A discussion and practice on experimental teaching for specialty of management. *China Manag. Infor.*, 13, **6**, 124-126 (2010).
4. Gu, W., A research and discussion on the experimental teaching for specialty of economics and management. *J. of South China Agricultural University*, 5, **3**, 152-154 (2006).
5. Qiu, Y., Problems and countermeasures in experimental teaching of economics and management: take the example of shandong institute of business and technology. *Value Engng.*, 19, **4**, 188-189 (2010).
6. Guo, X., Design and implementation of the experimental teaching system for management specialty. *Computer Knowledge and Technol.*, 6, **3**, 536-538 (2010).
7. Zhong, S. and Zhang, X., Research on the experimentation platform design for economy and management specialty. *Research and Exploration in Laboratory*, 23, **4**, 67-71 (2004).