Reform of Financial Management Course Based on CDIO Model under the Background of Mass Entrepreneurship and Innovation

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Abstract. Based on the current Chinese environment of mass innovation and entrepreneurship, starting from the orientation and objectives of Applied Undergraduate Colleges and universities, the necessity of incorporating innovative entrepreneurship theory into the course of Financial Management is analyzed, and then a teaching model based on CDIO is proposed. The organic integration of the course teaching of "Financial Management" and the education based on mass entrepreneurship and innovation is explored from the aspects of innovative curriculum conception, innovative curriculum design, innovative curriculum implementation and innovative curriculum to promote students' ability in innovation and entrepreneurship.

Introduction

Innovation education and entrepreneurship education is the focus of higher education reform in China at current stage. The organic integration of the education based on innovation and entrepreneurship and professional education is one of the problems that must be solved in the education based on innovation and entrepreneurship in China. Financial Management is one of the core courses of financial management specialty in colleges and universities. The level of practical application of financial management knowledge is an important symbol to measure whether the students majoring in finance and accounting in colleges and universities have innovative consciousness and entrepreneurship ability.

Orientation and Objectives of Applied Undergraduate Education under the Background of Mass Entrepreneurship and Innovation

Innovation and entrepreneurship talents refer to those who have the spirit and ability of innovation and entrepreneurship and the thinking and perspective of innovation and entrepreneurship, have the ability to discover and solve new problems, and then invent new things. In 2015, the "Opinions on the Implementation of Deepening the Reform of the Education Based on Innovation and Entrepreneurship in Colleges and Universities" issued by the State Council of the People's Republic of China pointed out that: colleges and universities should improve the training mechanism of innovation talents and the curriculum system of the education based on innovation and entrepreneurship.

Applied undergraduate colleges and universities need to cultivate students' practical ability of innovation and entrepreneurship. Through entrepreneurship, the employment is promoted. Innovative talent training mechanism should be the core content in the talent training model, and with CDIO as the model, efforts should be made to build the training objectives of innovation talents. In the education based on mass entrepreneurship and innovation, professional education and the education based on innovation and entrepreneurship should be effectively combined, which is the main way to train high-quality talents with vocational skills and innovative thinking.
Framework Design of Financial Management Course Based on CDIO Concept

Meaning of CDIO

CDIO is an English abbreviation of conceive -design -implement-operate, which is a teaching mode proposed by the teaching reform team of Massachusetts Institute of Technology and other universities after years of continuous research and practice. The teaching of financial management course based on CDIO concept can more effectively decompose and conclude the knowledge, ability and quality required by financial managers as curriculum standards through the analysis of the financial management work of enterprises. Through the decomposition and conclusion, the work tasks can be converted into curriculum contents, transforming the traditional professional curriculum model characterized with knowledge imparting into the teaching model based on working process, which can solve the problems brought about by the disconnection between theoretical teaching and practical economic activities and the weakness of students’ practical ability to the greatest extent, effectively integrate teaching, learning and doing into the standard framework of curriculum, and form an integrated teaching mode conforming to modern educational and teaching concepts.

Overall Framework Design of Financial Management Course

Based on the concept of CDIO, the financial management curriculum can be constructed from four aspects: conception, design, implementation and operation.

Firstly, the curriculum objectives for SMEs should be conceived and determined based on the investigation on middle and small-sized enterprises, peer colleges and graduates. Then curriculum contents should be designed and corresponding curriculum standards should be formulated according to the typical tasks of middle and small-sized enterprises. Besides, different teaching methods should be adopted to integrate the specific requirements of students’ knowledge, ability and quality into each project. And the diversified evaluation mechanism should be adopted to evaluate students’ learning contents.

Thoughts on the Reform of Financial Management Course Based on CDIO Concept

Conceptual Concept Based on Pertinence

Conceiving should start with the goal of curriculum and emphasize the pertinence of curriculum design. Because the course of financial management aims at serving small and medium-sized enterprises under the background of mass entrepreneurship and innovation, the work contents of small and medium-sized enterprises should be analyzed, the typical work tasks should be summarized and refined and the characteristics of small and medium-sized enterprises should be found out hereby. In addition, corresponding curriculum standards should be formulated according to the requirements of small and medium-sized enterprises.

In this paper, the typical tasks and characteristics of small and medium-sized enterprises are summarized by investigating the financial management status of small and medium-sized enterprises and interviewing the financial leaders and graduates of small and medium-sized enterprises. The investigation shows that the financial management of most small and medium-sized enterprises mainly concentrates on the management of working capital, the management of financing activities, the management of investment activities and financial analysis. In traditional teaching, the two key parts, financial budget and income distribution, are not the focus of the work of small and medium-sized enterprises. Therefore, the details and omissions in teaching contents should be properly adjusted according to the focus of financial management of small and medium-sized enterprises, facilitating students to better adapt to the needs of their posts in the future.
Table 1. Task Analysis Table for Financial Management Work of Small and Medium-sized Enterprises.

<table>
<thead>
<tr>
<th>Work task</th>
<th>Proportion of enterprises carrying out this task</th>
<th>Characteristics of small and medium-sized enterprises in developing this work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund-raising activities</td>
<td>75.50%</td>
<td>Credit level is low, financing is difficult, and issuing stocks or bond raising is basically impossible. They are greatly restricted in bank loans and difficulty obtain loans. Most of them use their own funds or family financing, private financing, commercial credit and so on. They have few financing channels.</td>
</tr>
<tr>
<td>Investment activities</td>
<td>57%</td>
<td>Investment decision-making is not scientific enough, long-term planning is short. Most of their investment is domestic investment, and foreign investment activities are less. Long-term investment such as stocks and bonds is less, and most investment behaviors are short term.</td>
</tr>
<tr>
<td>Working capital management</td>
<td>85.20%</td>
<td>Purchases are mostly settled in cash, accounts receivable account for a large proportion in sales, and effective fund recovery efficiency is short, resulting in the loss of capital utilization efficiency. Insufficient scientific planning is made for the procurement of raw materials and the effective control of inventory collection, issuance and measurement is insufficient, easily causing the arrear of inventory and slow inventory turnover.</td>
</tr>
<tr>
<td>Profit distribution</td>
<td>35%</td>
<td>In dividend distribution, cash distribution mode is mostly adopted. The distribution mode is relatively single and the dividend policy is unstable.</td>
</tr>
<tr>
<td>Financial budget</td>
<td>49.60%</td>
<td>Budget content is relatively single, usually the budget of funds and profit statement.</td>
</tr>
<tr>
<td>Financial analysis</td>
<td>87.50%</td>
<td>Attention is mainly paid to the analysis of the debt paying ability, vitality and financial status of enterprises. The analysis forms and methods are flexible, mostly thematic and informative methods, which does not require the integrity of the analysis report and pay insufficient attention to the indicators of development ability.</td>
</tr>
</tbody>
</table>

**Design Concept Based on Practicability**

Design should be based on the typical tasks of enterprises and the practicability of curriculum design is emphasized. The financial management work of small and medium-sized enterprises is relatively simple but flexible in form than that of large enterprises. According to the results of the above research and analysis, combined with the suggestions of industry experts and front-line staff, the conversion design from typical tasks to teaching content has been completed.
### Table 2. List for the Design of Teaching Contents.

<table>
<thead>
<tr>
<th>Project</th>
<th>Course content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project I: Cognitive Learning of Enterprise Financial Environment</strong></td>
<td>Understand the objectives and contents of financial management, understand the institutions and post settings of financial management, understand the financial activities and financial relations in financial management, and understand the objective selection and coordination of financial management.</td>
</tr>
<tr>
<td><strong>Project II: Basic Knowledge of Financial Management</strong></td>
<td>Understand the concept of time value of funds, master the calculation of time value of funds, understand the concept of risk and risk reward, master the relevant calculation.</td>
</tr>
<tr>
<td><strong>Project III: Fund-raising Management</strong></td>
<td>Master the financing channels and methods of middle and small-sized enterprises, have the ability to forecast the demand for capital, master the calculation method of capital cost, and master the determination method of the best capital structure.</td>
</tr>
<tr>
<td><strong>Project IV: Investment Management</strong></td>
<td>Master the calculation method of net cash flow of project investment, the calculation of evaluation indexes of project investment decision-making, and the decision-making method of project investment.</td>
</tr>
<tr>
<td><strong>Project V: Management of Working Capital</strong></td>
<td>Master the daily management of cash, inventory and accounts receivable, correctly calculate the costs of accounts receivable, and formulate corresponding credit policies according to the different situations of small and medium-sized enterprises, and master the method of determining the optimum lot size of inventory.</td>
</tr>
<tr>
<td><strong>Project VI: Profit Distribution</strong></td>
<td>Understand the factors affecting the distribution of profits and the evaluation and selection of profit distribution policies.</td>
</tr>
</tbody>
</table>

**Implementation Concept Based on Feasibility**

Implementation should start with the characteristics of higher vocational students and pay attention to the feasibility. In the traditional teaching of financial management, theoretical teaching is often emphasized, lecture by the teacher is the major method, and students' active participation is poor; practice links are mostly based on simple case analysis, focusing on the test of theoretical knowledge,
so that practicability lacks and students cannot be trained to understand the knowledge they have learned.

Therefore, in the teaching of financial management course, advanced teaching methods such as PBL teaching method and ISAS teaching method should be referred to improve students' participation. For example, for the chapters of financial report analysis and project investment which are suitable for case explanation, learning should be put in meaningful problem situations, the cases of small and medium-sized enterprises should be selected, a series of problems should be designed, and students should be required to solve practical problems together in the way of group cooperation to promote their ability of collaboration and self-learning.

**Operational Philosophy Based on Scientificty and Timeliness**

Operation should focus on the scientificity of curriculum evaluation and strengthen process supervision according to the content of curriculum and the characteristics of higher vocational college students, so as to improve the initiative of students to participate in classroom teaching. Meanwhile, attention should be paid to timeliness in curriculum monitoring. Problems found in teaching should be timely and accurately feedback to teachers to help them correct the problems.

In the course evaluation, the whole process of multi-subject evaluation can be implemented according to the attitude of students to the course, the progress of the course and the contribution to the team. The evaluation can be divided into several parts, i.e., the mutual evaluation in the team, the mutual evaluation among teams and comprehensive evaluation of teachers. Corresponding weights should be mutually set by teachers and students and should be implemented in the teaching process.

**Acknowledgement**

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**References**

