Teaching Reform of "Financial Service Marketing" from the Perspective of Professional Competence Demands

Based on Web Crawling Data Analysis

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Abstract. With the deep integration of finance and technology, financial innovations continue to emerge, enriching financial products, and financial enterprises have put forward higher requirements for the job competencies and overall qualities of marketing personnel. Therefore, the reform of the "Financial Service Marketing" curriculum is imperative. This paper utilizes Python crawling technology to collect 3,384 job postings for financial marketing positions from Zhaopin.com, analyzing the geographical distribution, work experience, and educational requirements. By extracting keywords related to job competencies, it clarifies the demand for abilities. Based on these findings, the teaching content is reconstructed. During the teaching process, relying on the Youmooc teaching platform, a blended online and offline teaching mode is designed to achieve linkage in teaching links. Additionally, a diversified assessment scheme based on the entire learning process is implemented, incorporating the assessment of practical abilities such as professional qualities. This scheme reflects students' learning outcomes more comprehensively and timely, contributing to the cultivation of composite financial marketing talents who meet market demands.

Keywords: professional competencies; financial service marketing; blended teaching; web crawling

1 Introduction

With the deep integration of the financial sector and science and technology, financial innovations continue to emerge, and the types of financial products have become increasingly diverse[1]. Meanwhile, customer demands for financial products and services have become more diversified, personalized, and intelligent. In order to compete for market share and enhance customer satisfaction and loyalty, financial enterprises are facing unprecedented competitive pressures. Against this market backdrop, financial enterprises have imposed stricter and more comprehensive requirements on the job competencies and overall qualities of marketing personnel. Traditional marketing skills have become insufficient to meet the complexity and

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variability of the current market, with "being professional, good at communication, understanding the market, and skilled in marketing" becoming the basic threshold for those in financial marketing careers.

However, there are currently some problems in the teaching of the "Financial Services Marketing" course, which makes it difficult to fully meet the market's demand for financial marketing talents.On the one hand, the teaching form of the course mainly focuses on theoretical teaching, lacking case analysis and practical sessions that are combined with actual business scenarios. The alignment between the teaching content and the requirements of job vocational abilities is insufficient[2]. As a result, when students enter the workforce and face a complex market environment, they have difficulty in correctly choosing and applying strategies. They are at a loss when dealing with the marketing of specific products in actual work, and their abilities in teamwork and communicating with clients are somewhat lacking.On the other hand, the teaching resources of the course need to be enriched. The update of theoretical content is rather slow and fails to reflect the rapid development of the financial industry in a timely manner. The new marketing strategies, tools and platforms that constantly emerge in the development of the industry are difficult to be comprehensively introduced merely through textbooks[3].

In addition, the assessment content is not diverse enough, mainly focusing on theoretical examinations, and the practical assessment is insufficient[4]. This leads students to pay more attention to the learning of theoretical knowledge while neglecting the improvement of practical abilities.In response to the aforementioned issues, this study aims to utilize Python crawling technology to scrape job information for financial marketing positions on Zhaopin.com, extract job competency demands from corporate job postings, and reconstruct teaching content accordingly. Simultaneously, relying on the Youmooc teaching platform, a blended online and offline teaching mode and a diversified assessment scheme based on the entire learning process are designed, incorporating assessments of practical abilities such as professional qualities. Through these initiatives, the teaching quality of the "Financial Service Marketing" course will be improved, cultivating composite financial marketing talents with high overall qualities, solid professional knowledge, and excellent marketing skills to adapt to changes in the demand for financial marketing talent in society and promote the sustained and healthy development of the financial industry.

2 Research Methods

In this research, Python code was written to crawl and parse the job information of financial marketing positions on the Zhaopin.com website by utilizing the requests library and the BeautifulSoup library. After obtaining data in multiple aspects, statistical analyses were carried out on regional distribution, work experience, and educational background requirements. Keywords in job descriptions were extracted and classified to summarize the professional competency requirements. Based on these findings, the teaching content was reconstructed, an online-offline hybrid teaching model was designed, and a diversified assessment scheme was developed and applied to the course teaching practice.

2.1 Steps of Data Collection and Processing

Crawling the Job List Pages.
Use the requests library to send GET requests to obtain the HTML content of the financial marketing job list pages on Zhaopin.com, and then parse it through BeautifulSoup.

Traversing the Links of the DETAIL PAGES.
When parsing the HTML of the list pages, find the links of the job detail pages, traverse these links to send requests, and extract detailed information such as the working city, work experience requirements, educational background requirements, and job requirements.

Data Cleaning and Organization.
Clean the extracted data, remove duplicate and invalid information, and organize it into a format that is convenient for analysis.

2.2 Data Analysis Methods

Descriptive Statistical Analysis.
It is used to analyze data such as regional distribution, work experience, and educational background requirements, so as to understand the overall characteristics of financial marketing jobs in these aspects.

Keyword Extraction and Analysis.
Use Python's file operations, jieba word segmentation and the Counter class to count the frequency of keywords in job descriptions, extract keywords related to key ability requirements after sorting, and summarize job ability requirements by classification.

3 The Practice of Blended Teaching Reform of the "Financial Service Marketing" Course from the Perspective of Professional Competency Requirements

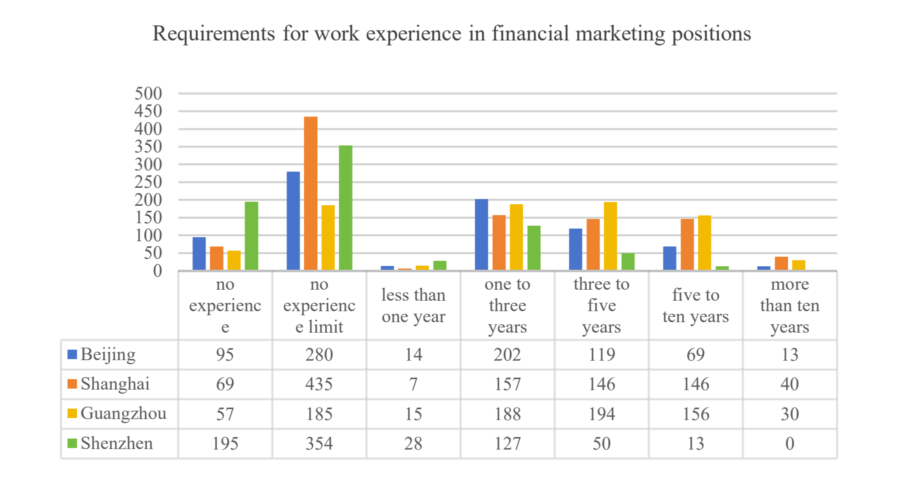
3.1 Deeply Mining the Professional Competency Requirements of Positions Using Python Crawler Technology

In order to gain a more comprehensive understanding of the professional competency requirements for financial marketing positions, this paper adopted Python crawler technology to crawl 3,384 pieces of recruitment information for financial marketing positions from the Zhaopin.com website. In the crawling process, Python code was written. The requests library was used to send GET requests to obtain the HTML content of the list page of financial marketing positions on Zhaopin.com, and BeautifulSoup was used to parse the HTML. During the HTML parsing of the position list page, links pointing to the position detail pages were found. By traversing the detail page links, requests were sent and detailed position information was extracted, including information such as the working city, work experience requirements, educational background requirements, and position requirements.

From the perspective of the distribution of recruitment areas for financial marketing positions across the country, Beijing, Shanghai, Guangzhou, and Shenzhen are hot recruitment cities, with the number of recruitment information being 792, 1,000, 825, and 767 respectively. These cities are far ahead in terms of the number of recruits and have become "highlands" where financial marketing talents gather. Behind this phenomenon is closely related to the booming economic conditions in these regions. Among them, Shanghai is renowned as China's economic center and an international financial metropolis, taking the lead in terms of the openness of the financial market, the innovation of financial products, and the optimization of financial services, and thus has a higher demand for financial marketing personnel.

It can be seen from Figure 1 that there are certain differences in the work experience requirements for financial marketing positions in different cities. The recruitment demands of Beijing, Shanghai, Guangzhou, and Shenzhen in the financial marketing field have their own characteristics.

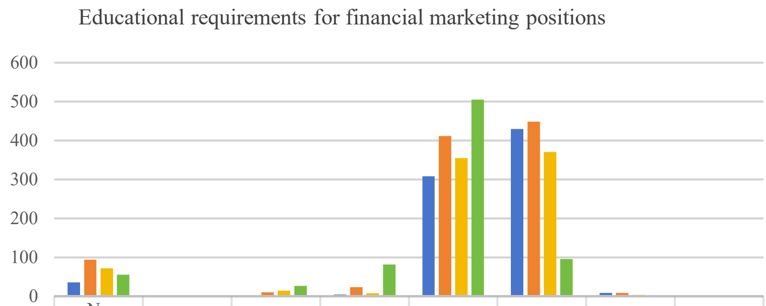
Overall, financial marketing positions have a relatively large demand for job seekers with "no experience limit" and "1 - 3 years" of work experience, indicating that the market welcomes newcomers and job seekers with some experience but not overly rich experience.



	no experience	no experience limit	less than one year	one to three years	three to five years	five to ten years	more than ten years
Beijing	95	280	14	202	119	69	13
Shanghai	69	435	7	157	146	146	40
Guangzhou	57	185	15	188	194	156	30
Shenzhen	195	354	28	127	50	13	0

Fig. 1. Requirements for work experience in financial marketing positions

It can be seen from the data in Figure 2 that enterprises in different cities have different educational background requirements for financial marketing positions. Among them, the demand for junior college and undergraduate degrees dominates, accounting for 46.7% and 39.8% respectively, and the requirements for other educational backgrounds are relatively fewer. The differences in educational background requirements among different cities may be related to local economic development, industrial structure, employment market and other factors.



	No educationa l backgroun d limitation	unior high school and below	echnical secondary school	senior high school	junior college	bachelor's degree	master's degree	doctor's degree
Beijing	36	2	2	5	308	430	9	0
Shanghai	94	0	11	24	412	449	9	1
Guangzhou	72	0	15	8	355	371	4	0
Shenzhen	56	0	27	82	505	96	1	0

Fig. 2. Educational Requirements for Financial Marketing Positions

It can be found from the above data that there is a relatively large demand for junior college and undergraduate graduates in financial marketing positions. About half of the positions don't have high requirements for work experience, which are quite suitable for such graduates. Therefore, junior colleges and undergraduate institutions should focus on the requirements for job vocational abilities in the teaching process and deeply integrate the cultivation of relevant vocational abilities into the teaching process, so as to improve students' job competence and employment competitiveness.

In order to understand the competency requirements of each position more intuitively, this paper used Python to extract some of the keywords with the highest repetition rates from the position description information of each position. Firstly, the file operation function of Python was used to read the position description information for which word frequency statistics were to be conducted. Then, jieba was used for word segmentation to obtain a word list, and the Counter class was used to count the occurrence times of each word. In order to obtain the words with the highest frequency, the Counter object was sorted, and the keywords with high frequency rankings were output. After sorting, the frequency distribution of keywords is shown in Figure 3.

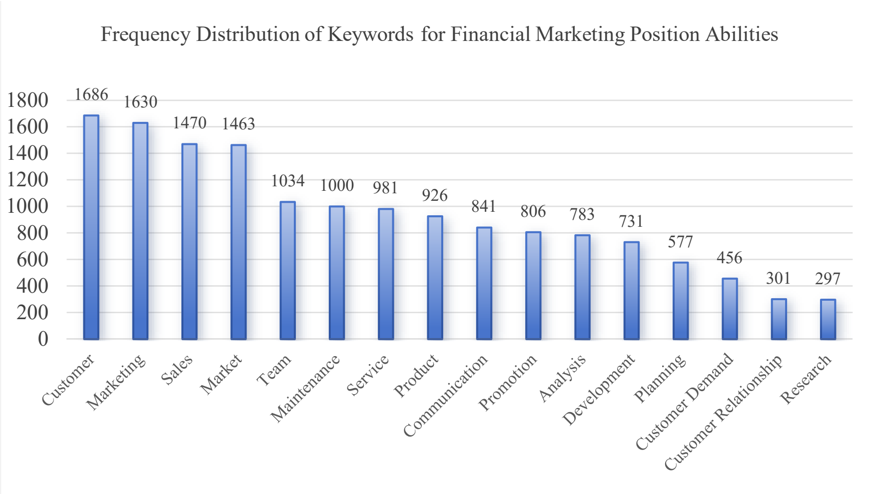


Fig. 3. Frequency Distribution of Keywords for Financial Marketing Position Abilities

Based on the frequency distribution of the above keywords, this article has focused on the core competencies of financial marketing positions and summarized them as the following core competencies:

Customer Orientation: The keyword "customer" has the highest frequency, reaching 1,686 times. This indicates that in financial marketing positions, it is crucial to have a deep understanding of customer needs, provide high-quality customer service, and effectively manage customer relationships. It enlightens practitioners to always put customers first and continuously improve their customer service skills, such as actively listening to customers' opinions, quickly responding to customers' questions, and accurately recommending suitable products, so as to enhance customer satisfaction and loyalty and thus lay a solid foundation for personal career development.

Marketing Professional Competencies: The keywords "marketing" and "sales" follow closely with frequencies of 1,630 times and 1,470 times respectively, highlighting the importance of solid marketing professional knowledge and sales skills. Practitioners need to be proficient in various marketing theories and skillfully use various marketing tools and channels, such as online marketing platforms and offline promotional activities. Meanwhile, they should possess excellent sales negotiation and deal-closing abilities in order to achieve excellent results in their positions and obtain promotion opportunities.

Market Insight: The frequency of the keyword "market" is 1,463 times, meaning that financial marketing personnel must closely follow market dynamics and possess sharp market insight. They should be able to timely understand market trends, the situation of competitors, and changes in industry policies, so as to formulate effective marketing strategies, win advantages for enterprises in market competition, and also win recognition and development space for themselves in the workplace.

Team collaboration and Communication: The relatively high frequencies of the keywords "team" (1,034 times) and "communication" (841 times) show that financial marketing work usually requires close cooperation with team members, and good teamwork and communication skills are indispensable[5]. Practitioners should be good at cooperating with colleagues from different departments to jointly complete marketing projects. At the same time, they should be able to express their ideas clearly and accurately, understand the needs of others, avoid communication barriers, and improve work efficiency and quality, which is crucial for the smooth progress of career development.

Service Awareness and Maintenance Ability: The frequencies of the keywords "service" (981 times) and "maintenance" (1,000 times) suggest that financial marketing personnel should have a strong sense of service and pay attention to the long-term maintenance of customer relationships. They should not only provide high-quality service during the sales process but also continuously follow up after sales, solve customer problems, and improve customer experience, so as to establish a good personal and corporate brand image and accumulate a good reputation for career development.

Product Recommendation Ability: The frequency of the keyword "product" (926 times) reflects the importance of having an in-depth understanding of the characteristics, advantages, and risks of financial products. Through in-depth research on products, better recommendations of suitable products can be made to customers.

Innovation, Planning, and Analysis Abilities: The appearance of keywords such as "promotion" (806 times), "planning" (577 times), and "analysis" (783 times) indicates that in the highly competitive field of financial marketing, innovative thinking and planning abilities are the keys to standing out. Practitioners need to continuously explore new marketing promotion methods and event planning schemes to attract customers' attention and improve marketing effects, so as to achieve breakthroughs and development in their career paths. Meanwhile, through data analysis, marketing effects can be evaluated, market opportunities can be discovered, and a basis can be provided for optimizing marketing strategies, which helps to enhance personal value and career competitiveness in enterprises.

3.2 Reconstructing Teaching Content According to Position Competency Requirements

Based on the extraction and classification of position competency requirements mentioned above, this paper has reconstructed the teaching content of the "Financial Service Marketing" course. It mainly includes three theoretical modules, namely understanding financial products, financial marketing market segmentation and positioning, and financial marketing customer management, as well as a financial marketing simulation training module. Moreover, it has been further refined into the teaching content of each chapter. The specific ideas can be seen in Figure 4.

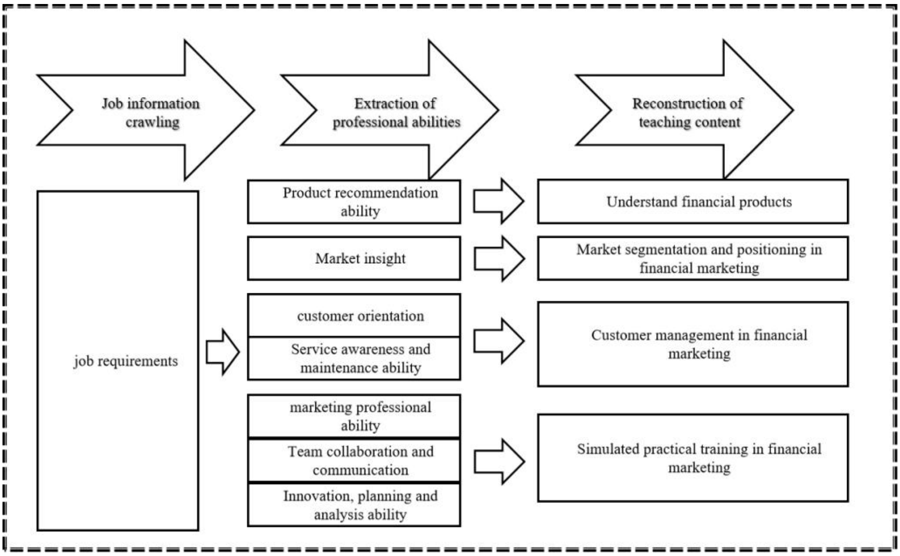


Fig. 4. Ideas for Reconstructing the Course Content of "Financial Service Marketing"

Through the design of this teaching content, the teaching content of each module closely matches the corresponding professional competencies. It can ensure that while students are learning theoretical knowledge, they clearly understand how to apply this knowledge to practical work, which helps to improve students' employment competitiveness. The financial marketing simulation training in Module 4 comprehensively applies the theoretical knowledge learned in the previous three modules through practical contents such as marketing strategies, plan formulation, and simulation presentations. This can not only deepen students' understanding of theoretical knowledge, but also exercise students' marketing professional ability, cultivate soft skills such as team spirit and communication ability, enabling students to adapt to the work requirements of financial marketing positions more quickly after graduation[6].

3.3 Design of the Online-Offline Blended Teaching Mode

In response to the problems existing in the traditional teaching of this course, this paper has designed the online-offline blended teaching mode shown in Figure 5. This mode relies on the school's UMOC online learning platform, emphasizing the close connection and mutual promotion among the three links of pre-class, in-class, and after-class, forming a closed-loop system. Through the effective linkage of these three links, seamless connection between online and offline is achieved.

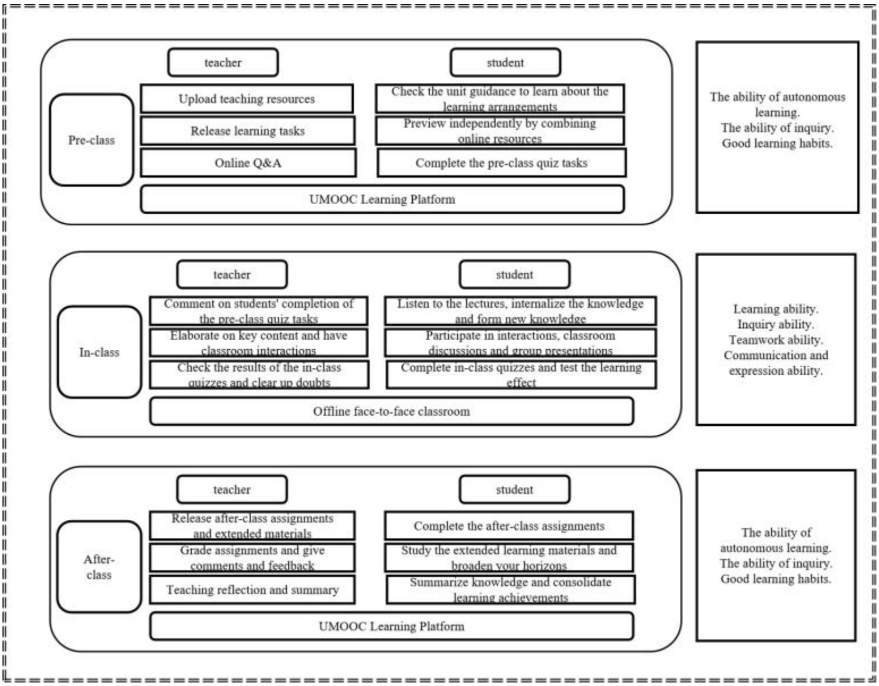


Fig. 5. Design of the Online and Offline Blended Teaching Model for the "Financial Service Marketing" Course.

1)Pre-class.

Before class, teachers upload learning resources (including course learning PPTs, teaching videos, etc.). The learning resources can incorporate actual cases of industry development, industry news, and cutting-edge lectures to truly enrich the teaching content. Meanwhile, it can ensure that the teaching content is closely related to the actual situation of industry development and keeps pace with the times. Learning tasks are released in the pre-class quiz module on the UMOC platform. On the UMOC platform, students can understand the learning content and arrangements in advance through the guidance of pre-class guidance, preview the learning resources, think about the introduction cases of the pre-class quiz before class, and try to think about and solve problems.

2)In-class.

Before class, teachers check students' pre-class preview and pre-class quiz situations. Combining the problems existing in students' pre-class learning, teachers conduct targeted knowledge explanations in class and adopt various teaching forms, such as simulated marketing projects, customer interviews, and market research, to effectively improve students' practical operation abilities. Students can participate in learning and interaction in multiple forms, including answering questions in class, participating in online classroom discussions on UMOC, group presentations, and scenario simulations. They also test the learning effect through in-class quizzes and summarize the main knowledge points of this class after the class ends.

3)After-class.

Students consolidate the knowledge points learned in class through case analysis of after-class homework, conduct extracurricular extension through after-class expansion learning, and internalize the classroom knowledge in connection with actual cases. Teachers understand students' mastery by checking the completion of students' after-class homework and conduct targeted explanations in the next class.

3.4 Diversified Assessment Design Based on the Whole Process

In response to the problems of insufficiently diverse assessment content and inadequate practical assessment in traditional teaching, this paper has optimized the design of course assessment to comprehensively, objectively and accurately evaluate students' mastery of financial service marketing knowledge, the application of practical skills and professional competencies under the blended teaching mode, ensuring that the assessment results can reflect students' potential in actual financial service marketing work.

The course adopts a combination of process assessment and final assessment. The process assessment includes learning attitude, online learning participation, and stage assessment. The composition of the course grade is as follows: learning attitude (10%) + online learning participation (20%) + stage assessment (30%) + final assessment (40%). Among them, the learning attitude includes class attendance and class participation. The assessment indicators for online learning participation cover the comprehensive score situation of online unit tests, the completion status of online discussions, and the scores of after-class assignments. The stage assessment is conducted in the form of offline written examinations to examine students' comprehensive understanding and application abilities of financial services marketing knowledge in specific learning stages, laying the foundation for the improvement of subsequent practical skills and helping to discover in a timely manner the weak links in students' knowledge mastery and adjust teaching strategies. At the end of the term, combined with the financial marketing simulation training, for example, simulating financial institutions to carry out new wealth management product marketing activities, students will be grouped to formulate marketing strategies, conduct market positioning, carry out customer relationship management and other operations, and conduct actual simulation presentations. The assessment indicators include the rationality of marketing strategies, the feasibility of marketing plans, team collaboration, and the effect of simulation presentations, comprehensively examining students' abilities in strategy formulation, plan implementation, team collaboration, and presentation in actual marketing scenarios. It is a comprehensive evaluation of students' practical skills and directly reflects whether students have the practical abilities to adapt to the work of financial marketing positions.

4 Conclusions

In the context of the in-depth integration of finance and technology and intensified market competition, financial enterprises have raised their requirements for the abilities of marketing personnel[7]. However, the traditional teaching model emphasizes theory over practice and has limited teaching resources, which cannot highly meet the job requirements for students' vocational abilities. Therefore, the curriculum reform of "Financial Services Marketing" is extremely urgent.This article uses web crawler technology to explore the job ability requirements and clarifies the characteristics of financial marketing positions in terms of regions, experience, and educational qualifications, as well as the key ability requirements regarding the market, products, customers, and professional qualities. Based on this, the teaching content is reconstructed to form four modules that combine theory and practice, which helps to enhance students' employment competitiveness.During the teaching process, an online and offline hybrid teaching model is adopted, relying on the UMOC platform to achieve effective linkage before, during, and after class, enrich teaching resources, and improve students' practical operation and interaction abilities. The optimized assessment design is comprehensive and objective, combining process and final assessment, paying attention to students' various performances, and accurately evaluating students' knowledge mastery, skill application, and vocational ability development.

Overall, this hybrid teaching reform from the perspective of vocational ability requirements has improved the "Financial Services Marketing" course in multiple aspects and helps to cultivate high-quality interdisciplinary talents in the field of financial marketing. The methods such as the reconstruction of teaching content oriented by vocational ability requirements and diversified assessment design in this hybrid teaching reform model have certain universality. For example, in related courses such as marketing and enterprise management, the research ideas of this study can be borrowed. According to the characteristics of their respective courses and industry requirements, specific ability requirement analysis methods and teaching content can be adjusted to implement hybrid teaching reform.When different types of educational institutions implement this reform model, they need to make adjustments according to their own resources, student characteristics, and teaching goals. Higher vocational colleges may pay more attention to the cultivation of practical skills and can increase investment in the practical training session; comprehensive universities can give full play to their advantages in theoretical depth and interdisciplinary studies to further expand the breadth and depth of teaching content.

References

1. Li Wei, Qiu Xiaoxing. Design of the Assessment Scheme Based on the Project-based Teaching Reform of Courses—Taking the Course "Comprehensive Training of Financial Product Marketing Ability" as an Example [J]. Journal of Green Science and Technology, 2022, 24(01): 251-253.
2. Ding Jie, Xiao Yingcai, Wang Mengyao, et al. Teaching Innovation Reform and Practice under the Background of New Liberal Arts—Taking the Course "Financial Marketing" of

Fujian Jiangxia University as an Example [J]. Journal of Fujian Institute of Financial Administrators, 2023, (04): 52-58.

3. Li Xuehui. Ideological and Political Teaching Design and Reflection of the Course "Financial Service Marketing" Based on the OBE Concept [J]. Journal of Luohe Vocational Technology College, 2023, 22(05): 98-103.
4. Xu Yuhui. Course Design and Teaching Implementation of Financial Service Marketing Skills [J]. China Educational Technology & Equipment, 2023, (03): 87-92.
5. Chen Xiaoxiao. Design and Application of Ideological and Political Education in the Skill Training Teaching of the Course "Financial Service Marketing" [J]. China Economist, 2022, (06): 163-165.
6. Median, Arthur. Financial Services Marketing. Translated by Wang Songqi. China Financial Publishing House, 2000.
7. Ennew, Christine, Nigel Waite, & Róisín Waite. Financial Services Marketing: An International Guide to Principles and Practice,2017.