Training Path of Nursing Professionals in Application-Oriented Universities under the Background of Industry-Academic Integration

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Abstract: Under the background of industry-academic integration, the society puts forward new requirements for the training of nursing professionals in application-oriented universities. This article focuses on this, deeply analyzes the present situation and problems, and explores effective training path strategies. Through the research on curriculum system, teaching staff, practical teaching and school-enterprise cooperation, this article finds that there are some problems in nursing specialty in application-oriented universities, such as the disconnection between curriculum and clinical needs, the shortage of "double-qualified" teachers, the shortage of practical teaching resources and the lack of school-enterprise cooperation. Based on this, this article proposes to optimize the curriculum system, take the post ability as the guide and update the content in time; Strengthen the construction of teaching staff, introduce and train "double-qualified" teachers; Improve the practice teaching system and create a high-quality practice environment inside and outside the school; Strategies such as deepening school-enterprise cooperation and realizing all-round collaborative education. The purpose of this study is to improve the training quality of nursing professionals in application-oriented universities and deliver high-quality nursing talents that meet the needs of the industry for the society.

1. Introduction

Under the background of the rapid development of social economy and the reform of medical and health undertakings, the demand for nursing professionals presents the characteristics of diversification and specialization [1]. Application-oriented universities, as an important position to train nursing professionals, shoulder the heavy responsibility of delivering high-quality nursing talents for the society [2]. Industry-academic integration, as an innovative education model, emphasizes the deep cooperation between industry and education, aiming at organically connecting the education chain and the industrial chain [3]. This provides a new direction for the training of nursing professionals in application-oriented universities.

With the promotion of healthy China strategy, the social demand for nursing services is increasing, which requires nurses not only to have solid professional knowledge and skills, but also to have good practical ability, innovation ability and professionalism [4]. The traditional training mode of nursing professionals, to a certain extent, is out of touch with the industrial demand, and it is difficult to meet the overall requirements of nursing talents in reality [5]. The emergence of industry-academic integration is precisely to break this dilemma. Through the close cooperation between schools, enterprises and industries, it integrates the resources of both sides, so that students can better contact with the actual work scene and be familiar with the industry trends in the learning process, thus cultivating applied nursing professionals who are more in line with the market demand.

Judging from the trend of education development, industry-academic integration has become an important measure to improve the quality of education and promote economic development in various countries. In China, a series of policies have been issued at the national level to encourage the promotion of industry-academic integration, which provides policy support and development opportunities for the training of nursing professionals in application-oriented universities [6]. Under this background, it is of great practical significance to deeply study the training path of nursing

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professionals in application-oriented universities under the background of industry-academic integration [7]. It is helpful to improve the teaching quality of nursing specialty in application-oriented universities, provide students with a broader career development space, and at the same time, it can also deliver better nursing talents for the medical and health industry, and promote the vigorous development of medical and health undertakings in China. The purpose of this study is to analyze the current situation and problems of talent training by combing the relevant theories of industry-academic integration and nursing professional training in application-oriented universities, and then explore practical strategies for talent training.

2. Industry-academic integration and related theories of nursing professional training in application-oriented universities

Industry-academic integration, in essence, is a concept and model that organically combines industry and education. Its core lies in breaking the boundary between education and industry, and realizing the resource sharing and complementary advantages of both sides. In this mode, the industry can deeply participate in the process of education and teaching, providing practice places, industry standards and the latest technologies and concepts; The education sector makes a talent training plan according to the needs of the industry, and delivers qualified professionals for the industry [8]. The training of nursing professionals in application-oriented universities has clear objectives and characteristics. It is committed to cultivating applied talents with solid basic nursing theory, skilled clinical nursing skills and good professional quality. To master the professional knowledge of nursing, this kind of talents also need to have strong practical operation ability and be able to engage in clinical nursing, preventive health care and other work in various medical and health institutions [9]. Industry-academic integration has many theoretical supports for the training of nursing professionals in application-oriented universities. On the one hand, it conforms to the educational concept of combining education with productive labor, which enables students to closely combine theoretical knowledge with practice in the learning process and improve the learning effect. On the other hand, industry-academic integration helps to build a competency-based talent training system, and through the docking with the industry, it is clear that students should have the ability and quality, so as to optimize the curriculum and teaching content. Industry-academic integration can also promote the rational allocation of educational resources, make full use of industrial resources to make up for the shortage of practical teaching resources in schools, and create better conditions for the training of nursing professionals.

3. Present situation and problems of nursing talents training in application-oriented universities

At present, the curriculum system of nursing specialty in many application-oriented universities is relatively backward, and it is difficult to keep up with the rapid development of nursing industry [10]. Through the investigation of several application-oriented universities, Table 1 is sorted out. In the 15 universities surveyed, the average renewal period of professional core courses is 4-5 years, but the renewal period of new knowledge and technology in nursing industry is about 2-3 years. This leads to the gap between the knowledge students have learned and the forefront of the industry, and it is difficult to meet the new requirements of the post when they are employed.

Among the nursing teachers in application-oriented universities, "double-qualified" teachers with solid theoretical knowledge and rich clinical practice experience are scarce. In the actual teaching, the theory teacher lacks the first-line clinical experience, which makes the teaching content theoretical and out of touch with the actual nursing work scene. Teachers have limited opportunities to participate in clinical practice training, which leads to the slow updating of teachers' knowledge and makes it difficult to integrate the latest clinical cases and technologies into teaching. Although the practical teaching sites and facilities in the school can meet the basic teaching needs, there is still a big gap compared with the real clinical environment. The layout, equipment configuration and information level of the simulated ward can not truly restore the clinical scene. The stability

and quality of off-campus practice bases are uneven. Due to their own business pressure, some practice hospitals have insufficient guidance for students, and students' internship gains are limited. According to the data in Table 1, about 30% of the internship hospitals can't provide each internship student with a dedicated teacher, and the systematicness and consistency of the internship content are difficult to guarantee.

Table 1 Comparison of the Curriculum Update Status of Nursing Majors in Some Application-Oriented Universities with Industry Demands

Survey Item	Specific Content
Number of surveyed universities	15
Average update cycle of professional core courses	4 - 5 years
Update cycle of knowledge and technology in the nursing industry	2 - 3 years
Proportion of "dual-qualified" teachers in the teaching staff	25%
Proportion of teachers who receive clinical practice training for more than one month each year	10%
Proportion of internship hospitals that cannot assign a dedicated teaching to each intern	30%
Proportion of enterprises participating in the formulation of talent cultivation plans	40%
Proportion of courses jointly developed by colleges and enterprises in the total curriculum	Less than 30%

At present, the cooperation between application-oriented universities and enterprises and medical institutions is mostly shallow, mainly focusing on the transportation of students' internship. In the key links such as personnel training scheme formulation, curriculum development and scientific research cooperation, the degree of cooperation between enterprises and universities is low. When universities formulate talent training programs, the participation of enterprises is only 40%, and the proportion of jointly developed courses is less than 30%. This lack of in-depth cooperation mode makes it difficult for talent training to accurately meet the needs of the industry.

4. Application-oriented universities nursing professional training path strategy

Table 2 Comparison of the Curriculum System of Nursing Majors in Application-Oriented Universities before and After Optimization

Course Category	Before Optimization	After Optimization
Basic Nursing Courses	Theory accounts for 70%. Practical operations are mostly simple demonstrations, lacking the integration of complex clinical cases.	The ratio of theory to practice is adjusted to 50%:50%. Increase practical training on common complex clinical cases and strengthen the standardization and procedural nature of operations.
Specialized Nursing Courses	Course content updates are lagging behind and out of touch with new nursing techniques in specific clinical departments.	Update content in a timely manner according to the needs of specific clinical departments and introduce course modules on emerging nursing techniques, such as the practice of new cancer nursing therapies.
Cutting-edge Courses	Rarely cover emerging nursing techniques and concepts.	Add courses on cutting-edge technologies such as smart nursing and rehabilitation nursing to enable students to understand the latest industry development trends.
Proportion of Practical Teaching	Overall practical teaching accounts for about 30% of the total curriculum.	Increase to 50% - 60%. Enhance the systematicness and coherence of practical teaching and set up comprehensive practical projects.

Optimizing the curriculum system is a key step in the training path strategy of nursing professionals in application-oriented universities. Application-oriented universities should conduct

in-depth research and dynamically adjust the curriculum according to the actual demand and development trend of nursing industry. Universities should build a curriculum system oriented to post ability and increase the proportion of practical teaching; Keep up with the forefront of the industry and integrate emerging nursing technologies and concepts into the curriculum in time. Taking smart nursing as an example, relevant courses are offered to familiarize students with knowledge such as remote nursing and intelligent nursing equipment operation. Table 2 shows the specific direction of curriculum optimization, from the traditional theory-based curriculum to a curriculum system that deeply integrates theory and practice and closely follows the industry trends to ensure that students' learning is closely linked with clinical practice.

Strengthening the construction of teaching staff can not be ignored. On the one hand, increase the introduction and training of "double-qualified" teachers. The school formulates preferential policies to attract nursing experts with rich clinical experience to teach in the school. Moreover, teachers in the school are regularly sent to the clinical front line for practical exercise to improve their practical teaching ability. On the other hand, we should build a diversified teacher training platform, encourage teachers to participate in academic exchange activities and industry seminars at home and abroad, and update the knowledge system in time. The school can also invite industry experts to give lectures and trainings to share the latest clinical cases and experiences. Through these measures, we will build a team of high-quality teachers with a solid theoretical foundation and rich practical experience. On campus, we should increase investment in the construction of nursing training center, simulate real clinical scenes for layout and equipment configuration, and introduce advanced medical information system to provide students with a highly simulated practice environment. Moreover, universities should strengthen the management of practical teaching and formulate scientific and reasonable practical teaching plans and assessment standards. Outside the school, universities should expand and optimize the practice base and establish a long-term and stable cooperative relationship with quality hospitals.

Deepening school-enterprise cooperation is the core of realizing the deep integration of production and education. Universities should establish an all-round and deep-seated cooperation mechanism with enterprises and hospitals. In the formulation stage of talent training plan, industry experts are invited to participate deeply to discuss and determine the curriculum, teaching content and talent training objectives. In the aspect of curriculum development, we should jointly compile teaching materials and teaching resources with industry characteristics. Moreover, carry out scientific research cooperation, and universities, enterprises and hospitals jointly declare scientific research projects to promote the transformation and application of scientific research results. Through the establishment of Industry-University-Research cooperation base, we can share resources and complement each other's advantages, and jointly promote the improvement of the training quality of nursing professionals.

5. Conclusions

Based on the background of industry-academic integration, this article makes an in-depth study on the training path of nursing professionals in application-oriented universities, analyzes the present situation and puts forward corresponding strategies. It is found that there are many problems in curriculum, teaching staff, practical teaching and school-enterprise cooperation in the training of nursing professionals in application-oriented universities. The curriculum system is not well adapted to the actual clinical needs, and the update is not timely, and the proportion of practical teaching needs to be improved; There are few "double-qualified" teachers in the teaching staff, and there are limited opportunities for teachers to update their knowledge and improve their practical ability; Lack of practical teaching resources; School-enterprise cooperation only stays at a shallow level, and there is a lack of deep collaboration in the key links of talent training. Aiming at these problems, the optimization strategy proposed in this article has strong pertinence and feasibility. Optimizing the curriculum system can make the curriculum closely fit the industry development and job requirements, and improve the matching degree of students' professional knowledge and practical skills. Strengthening the construction of teaching staff provides direction for building a

team of teachers with both theoretical and practical abilities, which is helpful to improve teaching quality. Perfecting the practice teaching system can effectively improve the practice teaching conditions and enhance students' practical operation ability and professional quality. Universities should deepen school-enterprise cooperation, promote all-round cooperation between universities, enterprises and hospitals, and jointly cultivate nursing professionals who meet the market demand.

Through the implementation of these strategies, it is expected to significantly improve the training quality of nursing professionals in application-oriented universities, meet the social demand for high-quality nursing talents, and promote the development of medical and health undertakings. In the future, application-oriented universities should continue to pay attention to the industry trends, constantly optimize the talent training path, deepen the industry-academic integration, and ensure that the training of nursing professionals always resonates with the social needs.

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