

## Developing a “Simulation of International Nursing Scenarios” Curriculum in China Using Action Research

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**Abstract:** Action research was used as a framework to develop a course called “Simulation of International Nursing Scenarios” in order to promote co-cultivation of English language proficiency and nursing specialty ability in Chinese nursing students who may will give service for foreigners. The study showed that the implemented curriculum was conducive to the development of students and teachers. The action research method was an effective way to construct this nursing curriculum, which could improve the supply of professional curriculum resources and cultivate both students’ English language ability and professional nursing ability, and promote the training of Chinese nursing talents working for foreigners.

### 1. Introduction

There are new challenges and needs for the training of nursing personnel, especially due to economic globalization and internationalization. On the one hand, factors such as heavy work of nursing in China, three shifts a day, low pay, and tension between doctors and patients lead some nurses want to go to developed countries to find a better working environment and higher incomes; on the other hand, with the development of the Chinese economy, employment of non-Chinese in China continue to increase; hospitals in major cities have set up wards or special hospitals for expatriates, nurses who work in these hospitals or wards have relatively high incomes, so more nurses are willing to work in these places than others. But not every nurse who wants to work in these places can go. Working in these places, nurses must have good English communication skills and professional nursing skills. So how to cultivate nurses with good English communicating skills and nursing professional ability in local environment is a problem and mission that modern nursing education in China must solve.

This study, part of an ongoing action research project, describes the development of a second-year course in a three-year vocational nursing program, titled “Simulation of International Nursing Scenarios,” one of the core courses in the international care curriculum.

### 2. Literature Review

Action research is a research method originated in the field of social psychology, first proposed by Lewin (1946). It is a method combining the wisdom and ability of researchers and practitioners to solve problems in work. There are many studies using action research to develop nursing courses. Okamoto et al. (2011) aimed at improving the occupational capacity of public health nurses, and designed nursing courses that significantly improved nurses’ abilities and are conducive to community work. Yang (2013) applied action research to develop a geriatric nursing course; the results show that students’ satisfaction with teaching methods and teaching content significantly increased.

Simulation has been an important aspect of nursing program curricula for decades (Gomez & Gomez, 1987), used alone or in conjunction with other teaching methodologies to enhance the learning experience (Sevgisun, 2017). Currently, simulation provides a hands-on approach to assessing a learner’s psychomotor skills and critical-thinking abilities (Blevins, 2014; Bremner, Adduddel, & Comer, 2005; Goris, Bilgi, & Korkut, 2014). Simulation experiences provide authentic and clinically relevant opportunities for experiential learning (Goris et al., 2014),

providing authentic situations whereby nurses are able to apply their skills in a forgiving environment with instructional support (Blum, 2010; Hayden, 2010) Simulation-based education's impact on student learning outcomes is well recognized (Zakari, 2017).

At present, however, no research applies action research to build a curriculum of "International Nursing Scenario Simulation" in China; this study endeavors to fill this gap.

### **3. The Problem of Educating To Foreign English Standards**

Educating nursing students in our school, we found that the content and teaching methods of the previous curriculum, named "English for Nursing Care," focused only on training students' English language ability for listening, speaking, reading, and writing, and did not foster their professional nursing ability or help them use English in practical contexts. As simulation is a good method for learning nursing skills, we resolved to develop a course in "Simulation of International Nursing Scenarios" to achieve co-cultivation of students' English language ability and professional nursing ability.

### **4. Planning For Change And Using Feedback Loops For Improvement**

#### **4.1 Discoveries**

In our curriculum, students could only learn the English language in the course named "English for Nursing Care" and could only learn professional knowledge and skills in other courses. Therefore, we applied action research to construct a new course, "Simulation of International Nursing Scenarios," with the following goals:

- To co-cultivate students' English language ability and professional nursing ability.
- To reinforce nursing skills students have already learned, including first aid, admission assessment, preoperative preparation, postoperative care, medication care, and obstetrical and gynecological care.

#### **4.2 Design and plans**

To develop the course, we referenced previously developed theories of "teachers as researchers" (Stenhouse, 1975; Elliott, 1991) and "practical reflective action research" (Schon, 1983), along with work from Sevgisun (2017). We also took to heart Elliott's suggestion that teachers must do reflective action research on the teaching content and teaching methods. Sevgisun suggested that in order to find a way of thinking to solve a problem, one must recognize it in action, reflect it in actions, and reflect on actions; in our present context, we conceptualized these steps as follows: the Problem of Educating to Foreign English Standards, Planning for Change and Using Feedback Loops for Improvement, Impact and Ongoing Commitment. We collected initial material through literature review, investigation research, interview research with students, and expert working conference; the goal was to build a comprehensive curriculum covering the skills and English knowledge required for clinical care via simulation in an English-speaking environment. The development and trial application of this curriculum included five aspects: curriculum design, curriculum objectives, course content, course implementation, and evaluation of students' achievement. Strategies which were used to engage and instruct the students included lectures, role simulation, dialogue and discussions with peers and instructors, performing caring actions, oral presentations, and recording and reflecting on caring. Each of these strategies is supported by the literature on instructional strategies (Jane et al., 2007).

#### **4.3 Participants**

Participants in the development of the curriculum included teaching and management staff, curriculum teachers from different departments of hospitals, the researchers, and foreign nursing students participating in learning this curriculum. We constructed and implemented the course of "Simulation of International Nursing Scenarios" based on the results of the conference including these experts and students' feedback for multiple rounds of iterative feedback.

## **4.4 Changes and interventions**

The content of the previous course of “English for Nursing Care” was arranged according to the system of human body, and the traditional teaching method is mainly adopted. Compared with the previous course, the new course has been changed in Curriculum design, Curriculum objectives, Course content, Course implementation, Students’ achievement evaluation ,as described below:

### **4.4.1 Curriculum design**

Curriculum was designed based on the outline of the qualification examination for nurses, based on the International Standards for Professional Nurses (ISPN): focusing on professional competence training, taking the task lead as the basis, and adhering to the teaching concept of combining various teaching methods, especially the scenario simulation teaching method.

### **4.4.2 Curriculum objectives**

Through this course, students were meant to be able to understand the specialties of international nursing jobs, and be proficient in using nursing English to record and communicate with others while working for foreigner. Nursing skills of students were expected to be improved. Through the introduction of English cases and background knowledge, students’ understanding of basic medical vocabulary was expected to be enhanced; at the same time, students were encouraged to learn vocabulary by themselves that would improve their self-directed learning ability. By simulating real working scenes, students can develop team spirit, interpersonal communication skills, and comprehensively utilize their professional knowledge.

### **4.4.3 Course content**

The course begins with a comprehensive simulated case of a traffic accident, which links pre-hospital emergency care, admission assessment, preoperative preparation, postoperative care, medication care, obstetrics and gynecology care, and other items together in logical order after the accident. Specific simulation scenarios include pre-hospital cardiopulmonary resuscitation, care for trauma, measurement of vital signs, physical evaluation, skin test, intravenous injection, drainage care, nursing for COPD, therapy of oxygen, aspiration of sputum, abdominal assessment of pregnant women, and physical measurements of children. Students have learned all these skills before in other courses.

### **4.4.4 Course implementation**

10 teachers participate in the course, they include 6 teachers with foreign study experience and 3 clinical nursing teachers. The course was taught for 4 hours each week for 7 weeks, with two teachers for each time. Teaching strategies included 20- to 30-minute lectures, followed by small group simulation in a special simulation room and then class discussion and sharing regarding the simulation . Many teaching strategies were used to help prepare students for their future occupation, for example “integration of theory and practice” (Jiang et al., 2015) teaching, setting up cases of international nursing situations, using small class groups, role playing, cooperative team learning, and simulated scene training, paying attention to the combination of language and practice and making full use of multimedia, network information resources, scenarios related to text, and so on to deepen students’ learning.

The students were divided into 13 groups—4 per group, with one scenario for each two hours for each group. As stated above, first of all, all groups did background learning on the professional nursing theme, including vocabulary, with one teacher. Then they simulated nursing skills and dialogue based on the scenarios in the given case, as teachers observed and guided their performance. In the last 15 minutes, all the groups discussed and shared their learning experience in the scenario. For example, the group focusing on pre-hospital cardiopulmonary resuscitation learned vocabulary and skills knowledge related to CPR, then completed role assignment and drew up a plan, and did a simulation project involving CPR on Sims: calling for help, conducting artificial respiration, pressing on heart, etc. Planning for this activity involved setting goals,

managing schedules, determining procedures, and describing expected outcomes.(Jane et al., 2007).

Evaluation of students' achievement We established an overall evaluation system for core competences, emphasizing the formative evaluation (Bloom, 1956); the ratio of formative and summative evaluation is 1:1. Formative evaluation includes three aspects: knowledge, attitude, and operational skills. Specifically we evaluate the students' homework completion, group cooperative learning attitude, classroom participation, ability to complete the task. The summative evaluation evaluates students' ability in the areas of cooperation, communication, and other aspects of overall competency through oral presentations and group simulation of case scenarios. In the oral presentation, one member of each group presents one case the group has learned. In the simulation, members of the same group gain the same score. Take "Operating Criteria for First aid"for example in table 1.

Table 1 Operating Criteria for First aid

Project		Rules	Score
Practice (40 scores )	Preparation before operation	Prepare for material	2
		Assess environment and determine consciousness	3
		Initiate EMSS	
	CPR	Do the CPR correctly	20
	Bleeding control	Choose the right site to stop bleeding. Mark it correctly.	4
	Dressing	Treat wounds correctly.	4
	Fixation	Methods of fixation is correct.	4
	Moving	Choose the suitable moving method	3
communication(20 scores )		Word accurately	5
		Language is fluent	5
		Express clearly	5
		Emergency consciousness	5
Recording and health education (20 scores )		CPR (Record the emergency time, process, etc )	10
		Trauma care (process)	10
Team work(20 scores )		The team leader command	6
		Team members can follow leader's instructions	6
		Solidarity and collaboration between all the team members	8

#### 4.5 Benefits and Ongoing Commitmentstudents' Feedback

Students give a positive assessment of the effectiveness of the curriculum implementation. Students agree that the construction and implementation of this course is conducive to the cultivation of students' professional ability ,language ability, Clinical thinking, self-directed learning and teamwork.They also agree that it can also promote developing Humanistic quality .They are satisfied with the course.

We also ask students to describe the learning experience. Content analysis showed that students could improve their English ability and their practical skills through participating in this course, and that students like this course. One student said: "I can communicate with others in English better than before." Another said: "This course is beneficial for me. I like it." Still other students answered: "My nursing skills have been improved through studying this course"; "This class gave me a deeper experience of real nursing situations"; and "I like the teaching method of simulation in this course."

But students also reported that the impact of curriculum learning on the nursing professional

values and cultural consistency is not obvious. It could be related to the lack of content in this course.

#### **4.6 Benefits according to teachers**

The results of teachers' feedback show that the construction and implementation of this course are conducive to the cultivation of students' comprehensive abilities and the improvement of classroom participation, and that the spiraling action research method is conducive to the improvement of teaching quality. The reasons may include the following:

(1) The course content includes a series of nursing scenarios ranging from pre-hospital first aid to admission evaluation and hospital care. It helps students to enter realistic medical scenes and gain experience. It is also conducive to cultivating and enhancing their comprehensive professional knowledge and skills.

(2) It helps to cultivate students' English language ability in an environment where students and teachers must communicate with each other in English, including listening, reading, speaking, and writing.

(3) A variety of teaching methods are used to improve students' participation in the classroom. Groups are encouraged to study cooperatively, which is conducive to cultivating students' self-directed learning ability and team spirit.

Teachers also agree that the development and implementation of this course are beneficial for them and for the curriculum. They are able to modify teaching methods according to students' feedback and to learn from each other in curriculum development meetings, where they analyzed one round of course implementation then worked hard to improve the next round on the basis of the analysis. In order to develop and redevelop such a curriculum, they need to constantly learn new knowledge, ideas, skills, and language. Ultimately, this process will benefit the nursing profession.

#### **5. Conclusions**

Through the three steps of action research, the "Simulation of International Nursing Scenarios" course was successfully constructed; evaluation results showed that it can solve the problem of disconnection between English language ability and professional nursing ability. The implementation of this course is beneficial for students and teachers.

One of the characteristics of the action research lies in the spiraling of the research process. The construction and implementation of the curriculum is still ongoing now. In the follow-up we will further improve the teaching content and methods based on the feedback from students to strengthen professional values and cultural consistency nursing.

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