

# Using ADDIE Model to Develop a Nursing Information System Training Program for New Graduate Nurse

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**Abstract.** This study is to develop a nursing information system (NIS) training program, and takes a local community teaching hospital in Taiwan for example. We adopt the ADDIE model to develop our NIS training program. We preliminaries followed the framework of the model to design a NIS training program, and implement it for the newcomers' training of nursing information system. After training course, the self-efficacy report has a significant ( $p < .000$ ) improved compare to pre-test, and 88% of participants passed the pragmatic exam.

**Keywords.** ADDIE model, training program develop, nursing education, nursing information system

## 1. Introduction

Although more and more hospitals implement the nursing information system(NIS) to help nurses to deliver health care services, but many researchers point out that nurses are lack of suitable NIS usage training generally.[1][2] However. It's difficult to provide adequate training for primary nurses. There are many obstructions including nonexistent or inadequate training program, lack of interest in computer technologies, negative attitudes toward computer systems, and hard to identify the training needs. [2] Although some studies mention some good characteristics of a training program for nurses, or make a training methods comparison to find out the best teaching model, but few study focus on the process of developing a NIS training program. Therefore, the aim of this study is to develop a NIS training program, and takes a local community teaching hospital in Taiwan for example..

## 2. Methods

We adopt ADDIE model, which consists of five stages, analysis, design, development, implement, and evaluation, to develop our NIS training program. The NIS training program development project team was consisted of two nursing informatics specialists, and a nursing supervisor. By following the framework of the

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ADDIE model, we analyzed the newcomers' learning needs and goals, design the content of the course unit, teaching strategies, and evaluation methods, and develop teaching materials. After all works done, we implement this program for the NIS training of new graduate nurses, and exam the effectiveness of the program by a 5-point likert scale self-efficacy questionnaire where "one" represents fully unacquainted and "five" represents fully acquainted and pragmatic test. All study occurred in a local community teaching hospital in Taiwan, and all participants joined the study with informed consent.

### 3. Results

We listed out 47 functions of NIS as learning needs, and identified learning goal of this training program as new graduate nurses could adopt all of 47 basic functions and utilize it when delivering care services after finish all courses. There are three parts in our program, a 60 minutes instructor-led course, a 240 minutes small group hand-on practice course and online self-study materials. Teaching materials include a NIS overview slide for instructor-led course; six scenarios contain all 47 functions for hand-on practice course, and eight operating manuals.

Twenty-five new nurses have completed the courses. The self-efficacy reports show average  $3.95 \pm 0.59$  among all functions and have significant improvement ( $p < 0.00$ ) compare with pre-test. 88% of participants can also make way for the pragmatic test.

### 4. Discussion

Lacking a suitable training program has grown up to be a major issue of nursing informatics. The ADDIE model offers a task-oriented framework for the training course development. It allows program designer focus on the learners' needs and goals, and reducing the redundant procedurals. And the result shows that our training program which developed under ADDIE framework can train new graduate nurses to use NIS expeditiously.

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### References

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