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護理資訊素養課程設計與實施之行動研究

An Action Research Approach to Curriculum Development of  
Information Literacy in Nursing Practice

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## 中文摘要

健康照護的知識發展與時俱進，為使臨床護理工作與研究成果能相互連結，並應用於解決臨床照護問題，培養護理人員具備資訊素養能力是一項重要的課題。本研究採用行動研究法，透過觀察、規劃、執行與評估四階段，設計適合護理學生的資訊素養課程，融入實證護理的概念，藉此培養護理學生具備資訊素養能力，並針對教學內容進行評估與提出改善方案，以精進課程。

在觀察階段，本研究透過文獻分析與深度訪談臨床護理師，結果發現在醫療照護的環境中重視實證護理，而護理人員具備資訊素養能力則能有效地執行實證照護的工作。在護理資訊素養課程的內容設計上，應結合照護情境，使護理學生在學習過程中能與臨床的應用相互結合；在教學策略方面，則應安排實作活動，有助提升學習成效。

在規劃階段，本研究針對北部某科技大學進修部二技護理系一年級學生所開設的資訊素養課程進行課程設計。課程以美國大學暨研究圖書館學會 (Association of College and Research Libraries, ACRL) 公布的「護理資訊素養能力標準」作為架構，並結合實證護理的發展趨勢，規劃出實證導向護理資訊素養課程。內容包含課程導覽與實證護理、界定題目、搜尋策略、呈現策略與合理合法使用資訊五個模組，並於各單元融入相對應的教學活動，達到做中學的目標。

在執行階段，本研究採類實驗設計，將參與研究的三個班級分為實驗組與對照組，進行九週實證導向與資源導向的護理資訊素養教學。

在評估階段，本研究於課程實施的第一週和第九週針對 108 位修課學生進行護理資訊素養能力前後測。研究結果顯示：1.在護理資訊素養能力、認識實證護理的程度與回答問題信心程度的表現上，實驗組與對照組均達顯著差異( $p<.001$ )，顯示資訊素養課程的介入能有效提升護理學生的相關能力。2.在護理資訊素養能力後

測總得分的表現上，實驗組優於對照組，ANOVA 檢定達顯著差異( $p<.05$ )。3.實驗組在界定主題核心概念、檢索技巧、正確引用書目、實證護理英文名稱與判斷實證證據等級的面向優於對照組，顯示實證導向的課程設計對於提升護理學生的資訊素養能力優於資源導向，可做為改善課程的參考依據。其次，在學期結束後進行修課學生的深度訪談，根據訪談結果發現實驗組與對照組的受訪護理學生均認為在接受護理資訊素養課程後能認識更多實證醫學資料庫、提升取得文獻的能力、願意使用英文文獻，並從學習過程中產生成就感與提升自信心。在課程設計方面，受訪護理學生認為課程內容新穎又實用、教師教學方式活潑、教材製作簡單易懂，有利學生自學或解決學習問題。在學習問題方面，受訪學生表示需加強英文閱讀能力，才能具備評讀文獻的能力；而針對年齡較長的學生需加強電腦素養，才能提升其操作資料庫或書目管理軟體的能力。

針對實證導向護理資訊素養課程改善方案，在教學內容方面需調整部分課程單元、教材內容與實例，並著手規劃數位教材；在教學策略方面需增加討論與實作時間，並考量學生特性設計教學活動，適時安排教學助理協助學生解決學習問題。

總結來說，在職護理學生的資訊需求是以解決照護問題與撰寫升等報告為主，而護理資訊素養的教學內容應結合臨床照護需求與實證護理的發展趨勢，建議以模組化的方式與臨床照護情境進行課程設計，並配合相對應的教學活動，則能有效提升護理資訊素養課程的教學成效。

**關鍵詞：**護理資訊素養；護理資訊素養能力標準；實證護理；課程設計；行動研究

## **Abstract**

Knowledge in the field of health care is rapidly developing. Therefore, it is important to cultivate nurses with information literacy. This study used an action research approach to design an information literacy curriculum in nursing practices that incorporates evidence-based nursing (EBN) and to evaluate its learning effects.

In the observation stage, through literature reviews and in-depth interviews with clinical nurses, the emphasis on EBN in nursing practices and the ability of nurses to procure information literacy were found to effectively facilitate the working of the health care field. While designing the curriculum of a nursing information literacy course, the care aspect should be integrated. In teaching strategies, learning activities should be aimed at improving learning outcomes.

During the planning phase, an evidence-based curriculum was developed. The curriculum was designed on the basis of the Information Literacy Competency Standards for Nursing issued by the Association of College and Research Libraries. The EBN information literacy curriculum had five modules: course orientation, defining research topics, search strategies, presentation strategies, and ethically and legally accessing and using the information.

A quasi-experimental design was adopted in the implementation stage. A study was conducted with students who enrolled for a two-year Bachelor of Science program in nursing in-service education at a university of science and technology in Taiwan. In all, three participating classes were divided into two groups: experimental group and control group. A nine-week-long, evidence- and resource-oriented nursing information literacy course was conducted.

For evaluating the learning outcomes, in the first and the last sessions, 108 students took pretest and posttest questionnaires, respectively, on information literacy competencies in nursing practices. A paired *t* test was conducted, and the test revealed that there were significant differences ( $p < .001$ ) between the pretest and posttest results with regard to information literacy competencies, knowledge level of EBN practices, and confidence level in answering the questions between the experimental group and the control group, indicating that the intervention of the information literacy course effectively enhanced students' relevant competencies. The information literacy competencies of the experimental group in the posttest evaluation were significantly improved in comparison with the control group ( $p < .05$ ). The EBN information literacy course had advanced teaching and learning outcomes for these three competencies in comparison with the course taken by the control group.

At the end of the semester, students who were interviewed from both groups believed that taking information literacy course had enabled them to learn more about empirical medical databases, improved their ability to obtain research evidence, and raised their willingness to access literature available in English. The learning process imbued them with a sense of accomplishment and self-confidence. In terms of curriculum design, the interviewees thought that the nursing information literacy course was novel and pragmatic, that the teaching methods and material were helpful for learning. In terms of learning problems, the interviewees indicated that they needed to strengthen their English reading ability and computer literacy.

To improve the EBN information literacy curriculum, the teacher needs to adjust some course units and content, develop digital study material, allocate more time for discussions and learning activities, consider their students' learning patterns when

designing learning activities, and appoint teaching assistants to assist students in solving learning problems.

In all, six conclusions were drawn on the basis of the results of the study: 1. Nursing students require information to solve clinical care problems and write reports. 2. The teaching effectiveness of a nursing information literacy curriculum is better than that of a one-time session. 3. The nursing information literacy curriculum should be designed in a modular way and under continuous development and in line with the trends in the fields of clinical care and EBN. 4. EBN information literacy curriculum is superior to resource-oriented nursing information literacy courses. 5. The curriculum should incorporate corresponding teaching activities that can improve the effectiveness of the nursing information literacy course. 6. Action research will be suitable for assessing the effectiveness of the EBN information literacy curriculum.

**Keywords:** information literacy in nursing; information literacy competency standards for nursing; evidence-based nursing; curriculum development; action research