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• 中文摘要	從台灣地區緝獲毒品統計資料發現，俱樂部毒品(大麻、MDMA 快樂丸，GHB, Rohypnol, ketamine, methamphetamine 甲基安非他命, and LSD) 緝獲數量皆有大幅成長之趨勢；因此，如何有效防制俱樂部毒品濫用應視為目前當務之急的工作。然而從防制毒品濫用之傷害減少(Harm reduction)策略角度來看，傳統式之平面媒體文宣及教條式反毒教學內容，已讓毒品濫用防制工作面臨新一瓶頸，且目前網際網路上提供之藥物濫用防制資訊，皆屬單向被動式之線上學習模式。本研究結合藥物濫用資訊（Drug Abuse Information）和數位學習（E-learning）系統發展的特點，建立一不受時空限制的『藥品濫用預防學習網』。同時基於毒品濫用族群之人格特性，開發一互動式網路線上學習模式，『虛擬藥物濫用情境模擬』(Virtual Drug Abuse Scenario Simulation, VDASS)，藉由多媒體動畫模擬各種俱樂部毒品濫用後感覺、症狀、行為、副作用、後遺症等之情境及如何尋求解決管道之特色，讓已濫用者提高對線上學習之動機，先行了解虛擬中之藥物濫用結果面，也讓因「好奇心」驅使下以身試藥之行為降低，進而達到藥物濫用減少傷害(Harm Reduction)之目的，是本研究計劃之主旨。本計劃參考分享式內容物件模式 (Sharable Content Object Reference Model)之精神配合虛擬情境模擬(Virtual Scenario Simulation)的方式，來規劃藥物濫用線上數位學習(e-learning)的教材與學習活動，以醫藥相關醫護背景專家的建議來規劃內容架構，配合以多媒體知識庫為基礎之系統管理平台，提供全民藥物濫用知識、發展藥物濫用教學輔助資源並成為藥物濫用學習網站。成效評估部分，本計劃主要任務在先建立毒品濫用之網路學習模式，成效評估預計則以專家評估及特定學習者之評估為主，包含 VDASS 使用者與傳統書面學習者的成效測驗評估，以及利用網站滿意度問卷瞭解此網路學習模式的適用性與可行性。本研究成功地利用軟體發展流程完成一套搖頭丸虛擬情境藥物濫用模擬動畫（MDMA VDASS），另外建立含括上述虛擬藥品濫用情境模擬體驗區，並包含藥物濫用專業知識區、線上學習教學資源區、藥物濫用自我評估區、藥物濫用相關知識社群討論功能等之一不受時空限制的藥物濫用防制資訊醫學教育網路學習模式網站。研究統計結果顯示，受試者利用 VDASS 的學習成效與傳統的書面資料閱讀相同，都比沒有經過任何學習的組別來的明顯的好。並在相隔一個禮拜的學習成效維持		

之後測表現，與前測的考試結果無顯著差異。使用者對於網站架構、內容設計，以及輔助學習安排上也有著正面的評價。如果未來可以進行持續性的計劃，系統已較為成熟，將可以做針對此種學習模式比較廣泛的評估。另外在後續的研究中，可利用本研究所提供的虛擬動畫發展流程樣本繼續建置其他藥品 VDASS 互動式學習動畫，並加入站內資料全文檢索、搜尋外部網站相關知識等的功能，都是未來延續計畫發展的重點。

According to the statistical analysis, the rate of seizing Club Drugs has been increasing these years. It is very important to find ways for preventing drug abuse. From the point of view of harm reduction, traditional propaganda and education methods become more and more inefficient and ineffective. Although there are some web pages that provide information related to drug abuse, most of them are based on passive learning model. In this study, we will combine drug abuse information system and digital e-learning technology to implement an internet-based learning model for preventing abuse of club drugs. An interactive on-line e-learning model will be created, which is based on a very distinctive design called Virtual Drug Abuse Scenario Simulation (VDASS). The model will simulate many scenarios of drug abuse including the feeling, symptoms, behaviors, side effects, sequela, and the ways of preventing or solving those problems. Multimedia materials and learning activity will be implemented on a knowledge management platform. The learners should be more interested in and will have higher motive on the learning model. We expect that this system can reach the purpose of harm reduction of drug abuse. The idea of sharable content object reference model and virtual scenario simulation were adopted in this project to create the material and activities for the on-line e-learning system. The content was advised and contributed by many experts who have practical medicine experiences. Incorporated with multimedia knowledge database, the system management platform was established to provide the information about drug abuse and the education resources for medicine development, and become a portal web page for the education and information retrieval of drug abuse. The evaluation of the project was performed in both the effectiveness of the learning model and the web page itself. The evaluation was conducted by selected experts and students. The evaluation includes the comparison of the difference of learning effects between traditional learners and those who use VDASS e-learning method. The satisfaction score was also evaluated by questionnaire to test the suitability and feasibility of the system. In this project, we have successfully built a Virtual Drug Abuse Scenario Simulation for MDMA (MDMA VDASS). The portal web page of ? HH ? H ? ? The education and prevention of drug abuse ? HH ? HH contains several functions including the Virtual Drug Abuse Scenario Simulation, knowledge for experts/general population, on-line e-learning resources, self-evaluations, and learning/discussion community. The evaluation results show that the outcomes (test scores) of the traditional learners and the VDASS learners have no differences. The test scores of both of them are higher than the subjects without reading any materials. And, there is no difference between the immediate-test and follow-up test for all three groups. Therefore, the results supports our expectancy that the effect of using VDASS is the same as that of using the traditional materials, but VDASS is more fun. The users are also satisfied with the website structure, content, and the helpfulness for arranging learning schedules. In the future, more evaluation can be done for different user groups such as the general populations. The development procedures used for creating Flash animation for MDMA can be adopted for building other interactive e-learning platforms. Furthermore, the full-text searching and searching for related external web pages will be incorporated in the future system.

- 英文摘要