

# Analysis of the Effect on Cardiopulmonary Endurance Via Improved Strategy of Physical Fitness Interventional College Physical Education Course for Students - Using the Yu Da College of Business as An Example

Shu-Chen Chen\* Wen-Chung Lin\*\*

## Abstract

The aim of study is to explore the effect of the improvement on cardiopulmonary endurance via the implementation of physical fitness (PF) interventional college physical education (PE) course for students. There were total 2,662 new students who were enrolled between 2004 and 2006. One-kilometer running/walking test was administered and two-year vertical tracking records were analyzed in these subjects. The cardiopulmonary records and detection of rate of change in three academic years were analyzed using independent variables, and furthermore, difference between PF pre-intervention and PF post-intervention college PE course was measured using independent sample t-test with a significance level of 0.05. Our results revealed a significant decrease of cardiopulmonary endurance in new male students in three academic years, and moreover, 2-year vertical tracking records presented an obvious decrease. However, after an improved PF intervention strategy in PE course was introduced in 2006, the rate of decrease was reduced. This study indicated that an improved PF intervention strategy in PE course could significantly enhance cardiopulmonary endurance in students, suggesting this intervention method should be continually promoted and its effect should be persistently tracked.

**Keywords:** college physical education, physical education course, cardiopulmonary endurance

大專體育課程介入體適能改善策略對學生心肺耐力成效之分析  
--以育達商業技術學院為例

陳淑貞\* 林文忠\*\*

---

\* Assistant Professor, Department of Recreational Sports Management, Yu Da College of Business.

\*\* Associate Professor, Department of Recreational Sports Management, Yu Da College of Business.

\* 育達商業技術學院休閒運動管理系助理教授

## 摘 要

本研究之目的主要在探討體適能介入大專體育課程實施，對學生心肺耐力提升之成效。受試者為 93~95 學年度入學新生，共計 2,662 名進行 1,000 公尺跑走測驗，並進行二年縱向追蹤之成績分析。以單因子變異數分析三學年度心肺耐力成績及三學年追蹤改變率，並以獨立樣本 t 檢定考驗體適能改善策略介入體育課程之介入前與介入後之差異性，顯著水準定為 0.05。結果顯示，三學年入學新生男生心肺耐力有顯著退步，且二年縱向追蹤成績皆呈現退步情形，但於 95 學年度體適能改善策略介入課程後，退步的比率降低。本研究指出，體適能改善策略介入體育課程對本校學生心肺耐力提升有顯著成效，建議應繼續推動並持續追蹤其成效。

關鍵詞：大專體育、體育課程、心肺耐力