

# 摘要

我國自 83 學年度推動教育改革以來，至 94 學年度為止，學士班人數已由 30 萬 2,093 人增加為 93 萬 8,648 人、碩士班人數由 3 萬 832 人增加為 14 萬 9,493 人、博士班人數則由 8,395 人增加為 2 萬 7,531 人，可見近年來大專校院學生數可謂急遽地增加。而我們由 94 學年度大學考試分發入學錄取率高達 89.08%，更顯示進入大學就讀已絕非難事。然而鑒於我國 2005 年的出生人口數已從 2000 年的 30 萬 5,312 人降至 20 萬 5,854 人，在此少子化的趨勢形成影響前，93 學年度大專校院的缺額數卻已高達 6 萬 471 人，顯現出大專校院的招生呈現出明顯供過於求的現象。研究者於是對中央主管教育行政機關以「總量管制」方式核定大專校院招生名額的機制產生濃厚研究興趣。

本研究採用「文獻分析法」及「問卷調查法」等兩個研究方法進行研究，其中旨在探討此大專校院招生名額總量管制之政策沿革與現況，並以更多元、開放的角度探討大專校院招生名額總量管制應達到哪些預期效益且嘗試建構其因素模式，接著依據前述預期效益建構出適當的大專校院招生名額總量管制指標，最後則探討不同背景變項(如性別、年齡、最高學歷、身份、學校體系、學校性質等)的受試者對大專校院招生名額總量管制預期效益與指標看法之差異。

本研究以李克特六點式量表、網路問卷形式設計成「大專校院招生名額總量管制預期效益與其指標調查問卷」來作為研究工具，並以「兩階段取樣」的方式來廣泛蒐集大專校院教師、職員與學生等研究對象的同意程度看法。其中第一階段係分別藉由函請各校轉寄 E-mail 通知該校教職員及學生上網填答、至各校 bbs 發表文章進行問卷施測通知等兩種途徑，獲得回收樣本數 8,473 份，扣除無效問卷 317 份後，總計有效回收問卷為 8,156 份，並據以建置為樣本資料庫。第二階段則採分層隨機抽樣方式分別於大專校院教師、職員及學生等三層各抽出 336 個樣本，總計獲得 1,008 個樣本。

此 1,008 個樣本將分別以 SPSS 13.0 及 LISREL8.72 等兩套統計軟體進行資料分析，其中將採用次數分配與百分比、算術平均數與標準差、t 檢定、獨立樣本單因子變異數分析、驗證性因素分析等統計方法進行分析，並經專家效度、聚合效度、區別效度及交叉驗證效度、Cronbach's  $\alpha$  係數、潛

在變項的組合信度、個別觀察變項的信度等檢定過程中證實本研究具有良好的研究效度與信度。

本研究總計建構出 13 個大專校院招生名額總量管制預期效益，其同意程度平均數(M)介於 4.48~5.28 之間，同意百分比(P)則介於 81.5%~96.4% 之間；至於此預期效益之因素模式則也獲得相當良好的適配結果，並據以證實大專校院教師、職員與學生對於大專校院招生名額總量管制預期效益的同意程度看法，會受到「保障大專校院教學品質」、「符合學生性向與需求」、「符合就業市場人力與專業需求」、「大專校院競爭力之維持與提昇」等 4 個潛在因素構面(或稱構念)的影響。接著，並依據前述預期效益建構出 26 個大專校院招生名額總量管制指標，其同意程度平均數(M)介於 4.30~4.94 之間，同意百分比(P)則介於 79.0%~93.9%之間。

此外，本研究亦發現，在性別、年齡、最高學歷、身分、專兼職情形、學校體系與學校性質等 7 個不同背景變項的受試者對大專校院招生名額總量管制預期效益與指標之同意程度看法的差異中，除了不同「學校體系」變項的受試者對指標看法沒有顯著差異、但對預期效益看法有顯著差異外，其餘 6 個不同背景變項皆在預期效益與指標的看法上有顯著差異。

最後，本研究並依據研究成果，提出下列具體建議：

- 一、總量管制預期效益不宜只考量「維持教學品質」，應進一步關注學生需求、就業市場需求、以及學校競爭力等方面的預期效益之達成情形。
- 二、總量管制指標不宜只考量到生師比、師資結構與校舍面積等指標，應以多元觀點發展出更多指標，以充分掌握招生管理資訊。
- 三、總量管制不應侷限在「每年成長總量的管控」，而應納入「減少招生名額」的情境條件。
- 四、宜適度減少各校擴增招生名額的誘因。
- 五、宜研議總量管制業務整併之可行性。
- 六、總量管制資料的蒐集宜化被動為主動，以掌握客觀審查資訊。

**關鍵詞：**大專校院、招生名額、總量管制、預期效益、指標、驗證性因素分析

# **Study on Constructing Expected effectiveness and Indicators of the Enrollment's Total Amount Control of Higher Education**

by

**Ching-Pao Chuang**

## **Abstract**

When Taiwan setting into education reforms from 1994 school years till 2005 school years, the students at classes of bachelor degree increase to 938,648 from 302,093, the students at classes of master's degree increase to 149,493 from 30,832, the students at classes of doctor's degree increase to 27,531 from 8,395. It is perceived that students of higher education increasing rapidly. Furthermore, the admission rates of universities' enrollment paths by entrance examination grades reaches 89.08%, it appears that entering into universities is not hard anymore. However, since population of births had reduced to 205,854 at the year of 2005 from 305,312 at the year of 2000, and before the impact of trends of few-children, the vacancies of enrollment of higher education had reached 60,471, we can find a obvious phenomenon that the supply of enrollment of higher education exceeds the demand. So I have a strong interest in the mechanism of how Ministry of Education ratifying the enrollment of higher education by the method of "Total Amount Control".

The study adopts two approaches, that is "literature review" and "questionnaire survey", and it explores the policy's developing progress and current situation of the enrollment's total amount control of higher education. Furthermore, it explores what expected effectiveness of the enrollment's total amount control of higher education should be reached with the diverse and liberal viewpoints, and tries to construct its factor model. Then according to the expected effectiveness, we establishes appropriate indicators of the enrollment's total amount control of higher education. Finally, we explore if subjects with different background variables, such as sex, age, degree, identity, full/part time, system of school, character of school, will have significant differences about opinions of expected effectiveness and indicators of the enrollment's total amount control of higher education.

The study designs the "questionnaire of expected effectiveness and indicators of the enrollment's total amount control of higher education" with

Likert six point scale and network questionnaire, and broadly collects samples of teachers, officers, and students of higher education by the methods of “Two stage Sampling”. At the first stage, I use two survey ways, that is e-mail informing and bbs informing, and I get 8,473 returned samples, and finally get 8,156 valid samples after reducing 317 invalid samples. At the second stage, I gains 1,008 samples from three layers of teachers, officers, and students of higher education with “stratified random sampling”.

The 1,008 samples will be analysed by two software of SPSS 13.0 and LISERL8.72. The ways of analysis include frequency and percentage, average and standard deviation, t-test, one-way ANOVA, confirmatory factor analysis. Furthermore, after the examining of expert validity, convergent validity, discriminant validity, cross- validity, Cronbach’s  $\alpha$ , composite reliability, and individual observed variables’ reliability, we have confirmed the study has good study validity and reliability.

The study finally constructs 13 expected effectiveness of the enrollment’s total amount control of higher education, and its average of agree extent between 4.48 to 5.28, its agree percentage between 81.5% to 96.4%. Furthermore, the factor model of that expected effectiveness has good fit results too, it confirms that the opinions on expected effectiveness of the enrollment’s total amount control of higher education will be influenced by the latent factors of “Ensure the teaching quality of higher education”, “Matching with students’ aptitude and needs”, “Matching with manpower and specialty’s needs of job market ”, “keep and promote the competitive ability of higher education”. Then according to the expected effectiveness, we establishes 26 indicators of the enrollment’s total amount control of higher education, and its average of agree extent between 4.30 to 4.94, its agree percentage between 79.0% to 93.9%.

Furthermore, the study find among the opinions’ difference of agree extent on expected effectiveness and indicators of the enrollment’s total amount control of higher education from 7 different background variables, such as sex, age, degree, identity, full/part time, system of school, character of school, beside the “system of school” haven’t significant difference on indicators but have on expected effectiveness, other 6 different background variables all have significant difference on expected effectiveness and indicators.

Finally, according to the results of this study, I propose some suggestions as follow:

1. The expected effectiveness of total amount control shouldn't be restricted within "maintain teaching quality", we should consider the expected effectiveness' implement of students' need, job market's need, and school's competitiveness further.
2. The indicators of total amount control shouldn't be restricted within the indicators of student-teacher rates, structure of teacher, superficial contents of school buildings only, we need more indicators with diversified viewpoints to get information for enrollment's managing.
3. The total amount control shouldn't be restricted by " the amount control of every years' growth", we need to add the conditions of "reducing enrollment".
4. We should try to appropriately reduce the "inducing factors" of universities increasing enrollment.
5. Ministry of Education should try to merge the affairs of total amount control from different departments.
6. We should collect the data of total amount control actively instead of passive, so that we can get objective information to examine.

**Key words:** higher education, enrollment, total amount control, expected effectiveness, indicators, confirmatory factor analysis

