An implementation of the Decision Tree on the investigation of the extension schoolcurriculum design

陳傳猷、楊豐兆

E-mail: 9222557@mail.dyu.edu.tw

ABSTRACT

The study sets to investigate the extent to which life-long education campaign, a back-to-school project vigorously promoted by the government, has an effect on its people toward the notion of qualification-orientation. As far as the extension school programme is concerned, almost all tertiary institutes in Taiwan have become bidders for the limited market shares, which have in turn posed an immediate threat to extension school operators themselves. It is self-evident that providing tailor-made courses to students by knowing what they need has become a survival key to long-term extension school operation. Based on questionnaires concerning factors affecting course selection retrieved from student data base, cross analysis and Chi-square test, the study aims at designing a tailor-made curriculum structure by applying extension school and the Decision Tree inductive analysis, a Data Mining methodology introduced by Berry and Linoff in 1997. An Answer Tree software is implemented in finding independent variable or dependent variable categories in order to display an accurate student-punctuality rate, which is believed to be a crucial reference in curriculum design.

Keywords: Extension Education, Decision Tree, Cross Analysis, Chi-square Test

Table of Contents

第一章 緒論 1.1研究背景與動機	1 1.2研究目的	2 1.3研究範圍與限制	2 1.4研究流程
3 1.5論文架構	4 第二章 文獻探討 2.1關	鍵名詞釋義	5 2.2大學推廣教育
6 2.3資料探勘	8 2.4資料庫相關議題	15 2.5決策樹模型	19 第三
章 研究方法 3.1定義問題	22 3.2研究架構建立	23 3.3資料檢視與處理	!25 3.4決
策樹(Decision Tree)歸納法探討35 3.5建橋	講決策樹模型37 3.6	3建立評估準則	46 第四章 實驗結
果分析 4.1資料來源與檢視47 4	1.2決策樹建立	50 第五章 結論 5.1結論	55
5.2未來研究建議55 參考文	て獻57		

REFERENCES

中文部分 1. 鄔文萍 ,「我國大學推廣教育發展之探討 」,東吳大學企業管理研究所碩士論文 ,民國90年。 2. 胡夢鯨 ,「終生教育典範 的發展與實踐」,台北師大書苑,民國86年。3.樓玉玲,「以資料發掘技術分析政大通識課程」。國立政治大學資訊管理研究所碩士 論文,民國87年。 4. 楊亨利、林幸怡,「先前知識導向的資料發掘」。中山管理評論,六卷三期,903-946,民國86年。 5. 吳旭志、賴 淑貞,「資料採礦理論與實務-顧客關係管理的技巧與科學」,維科圖書,民國90年。 6. 彭文正譯,「資料採礦-顧客關係管理及電子行 銷之應用」,維科圖書,民國90年。 7. 楊亨利、林幸怡,「先前知識導向的資料挖掘」,中山管理評論,六卷三期,民國86年。 8. 邱 皓政,「量化研究與統計分析」,五南圖書,民國91年。 9. 袁熒助,「應用線上分析處理於網站自動化統計機制之研究-以技職課程網 站為例」,國立台灣師範大學工業教育研究所碩士論文,民國91年。 10. 羅文琪,「建立物理治療門診患者功能關聯群之初探-以肌肉骨 骼系統疾病患者為例」,國立台灣大學醫療機構研究所碩士論文,民國91年。 11. 黃國光,「SPSS與統計原理剖析」,松崗電腦圖書資 料股份有限公司,民國91年。 英文部分 12. Kurt Larsen & David Istance, (2001) "Lifelong learning for all "Centre for Education Research and Innovation, OECD Observer. 13. Mok, K.H. & Lee, H.H(2000) Higher Education Policy, 13(4), pp.361-377. 14. Hand, D. J., Blunt, G., Kelly, M. G. and Adams, N. M. (2000) " Data mining for fun and profit". Statistical Science, v. 15, no. 2, 111-131. 15. Han, J AND M.Kmber(2000), Data Mining: Concepts and Techniques, San Francisco, CA, USA: Morgan Kaufmann. 16. UNESCO(1996). Learning: The Treasure within. Report to UNESCO of the International Commission on Education for the Twenty-first Century. Paris: UNESCO. 17. Malcolm Tight, (1994). Alternative Models of Continuing Higher Education Canada, Finland, The United Kingdom. Higher Education Management. Vol.6. NO.2. 18. W. J. Frawley, G Paitetsky-Shapiro, and C. J. Matheus, (1991). Knowledge Discovery in Database: An Overview, Knowledge Discovery in Database, California, AAAI/MIT press, 1-30. 19. M. J. A. Berry and G. Linoff, (1997). Data mining Technique For Marketing, Sale, And Customer Support, Wiley Computer. 20. U. M. Fayyad, (1996). Data Mining and Knowledge Discovery: Making Sense out of Data, IEEE Expert, Vol.11, No.5, 20-25. 21. Customer Retention Associates http://www.customerloyalty.org/. 22. Rauber Andreas,(1996)"Cluster Visualization in Unsupervised Neural Networks" Diplomarbeit (Master Thesis, in English), Technische Universit Wien, Austria. 23. http://www.spss.com.tw. 24.

