

大學校務研究與學校發展實例 - 以國立清華大學為例

Prepared for 高教評鑑中心『大學辦學領航系列講座』



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March 19, 2015

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什麼是校務研究?

Definition (Yale University)

The Office of Institutional Research (OIR) provides information to **support university decision-making** through a variety of analytic activities, data-gathering tasks, and research projects. OIR serves as a clearinghouse for most statistical information about the University. The office reports to and places first priority on work for **the Provost and for the Officers of the University**, while also working regularly with many other offices and individuals both inside and outside of Yale.

什麼是校務研究?

Definition (Univ. of Texas at Austin)

The **Office of Institutional Accreditation and Effectiveness (IAE)** establishes vision, leadership, and processes to strengthen the university's institutional effectiveness and accreditation efforts. We value strategies that advance educational, programmatic, and operational excellence in a way that is **evidence based**, **locally defined**, and **efficiency driven**. Across campus, we promote practices that result in:

- 1 higher student academic achievement
- 2 an enhanced student experience
- 3 aligned and transparent decisions
- 4 readily available information for improvement, accountability, and accreditation

什麼是校務研究?

Definition (Association for Institutional Research)

The field of institutional research (IR) is over 50 years old and is embedded in nearly every college and university in the United States and many others around the world. Often working behind-the-scenes, IR professionals support campus leaders and policy makers in wise planning, programming, and fiscal decisions covering a broad range of institutional responsibilities. These areas can include research support to senior academic leaders, admissions, financial aid, curriculum, enrollment management, staffing, student life, finance, facilities, athletics, alumni relations and many others. In addition to providing the data-informed foundation for good decision making, institutional researchers use the data they collect for governmental reporting and to benchmark their results against similar institutions.

什麼是校務研究?

Definition (彭森明講座教授)

針對學校內部之行政運作、管理、環境設備、教學措施、學生學習歷程與表現、學術研究，以及師生背景等過去與現在的資料，進行彙整、分析與闡述，使之轉換成爲有用的資訊，供校務規畫、政策制定，以及方案設計、執行與評鑑等決策論證之用，所演化成的一種特殊研究領域。

什麼是校務研究?

- ▶ 由上述定義可得知「校務研究」的研究範疇相當廣泛
- ▶ 『校務研究辦公室』扮演的角色: 政府 vs. 學校
- ▶ 我國的大專院校即使沒有明文設立『校務研究辦公室』, 但平時已經都在從事「校務研究」的相關議題
- ▶ 相對於西方常設的「校務研究辦公室」, 我國目前的「校務研究」的現況
 - ▶ 不同議題由校內不同的處室負責
 - ▶ 資料也通常散在個別負責的辦公室 (如註冊組、招生組、課務組、畢業輔導室、就業輔導室、計算機中心等等)

傳統決策方式

▶ 傳統學校決策的特徵:

- ▶ 決策者的個人意向和主觀見解, 相信有足夠能力做出最佳決定
- ▶ 決策的過程僅倚賴少數人和有限資訊
- ▶ 決策由「利益團體」運作、妥協產生

▶ 傳統學校決策面臨的困境:

- ▶ 近年來, 國際高教市場逐漸全球化、我國大學數量擴增以及少子化等內外因素夾雜, 增加學校決策的困難度
- ▶ 決策者的個人能力有限無法因應環境劇烈變化
- ▶ 倚賴少數人和有限資訊無法做出對學校整體而言最適的決策

「校務研究」決策方式

- ▶ 跳脫「有限理性」(Bounded rationality) 的侷限
- ▶ 從數據中萃取有價值的訊息以提供決策者
- ▶ 以蒐集到的資訊作為決策重要依據
 - ▶ 以證據為基礎的決策 (Evidence-based decision making)
 - ▶ 以資料為基礎的決策 (Data-driven decision making)
- ▶ 不僅提供訊息, 而且有效率的進行

「校務研究」決策程序

- ▶ 等同於從事一項實證研究
- ▶ 基本的程序如下：

- 1 確定議題和資料需求
- 2 開始資料蒐集
- 3 進行資料分析
- 4 分析報告與交流
- 5 形成最終決策

「校務研究」的演進

- ▶ 早期的校務研究活動
 - ▶ Cowley (1966): 1701 年 Yale University 組織管理研究
 - ▶ Stephens (1966): 1847 年 University of Missouri 學生問卷調查
 - ▶ Stephens (1966): 1856 年 University of Missouri 董事會的要求
- ▶ 50、60年代開始成長
 - ▶ 戰後嬰兒潮、高教擴張
 - ▶ 教師、學生、教學資料需求孔急
 - ▶ 1960年, 美國「校務研究協會」(Association for institution research, AIR) 成立, 為校務研究提供資訊與經驗交流的平台
- ▶ 70、80年代電腦使用
 - ▶ 調查問卷、電腦、統計方法使用
 - ▶ 校務研究機構紛紛成立
- ▶ 90 年代至今
 - ▶ 先進資料庫、網路
 - ▶ 研究內容系統化、研究方法多元化
 - ▶ 決策透明、跨校比較

校務研究的範疇

- ▶ 定期報告
 - ▶ 年報: Yale “Factsheet”, UCI “College portrait”
 - ▶ 共同報告: Common Data Set (CDS)
- ▶ 主題式分析
 - ① 畢業率分析
 - ② 學生學習投入
 - ③ 學生學習成效
 - ④ 學生滿意度
 - ⑤ 畢業生追蹤調查
 - ⑥ 老師教學成效
 - ⑦ 校園氣氛、種族關係
 - ⑧ 評估管理部門效率
 - ⑨ 財務規劃 etc...

如何進行校務研究

- ▶ 理念得到校方支持
 - ▶ Vice President, Assistant to the President, Provost, even President/Chancellor
- ▶ 成立校務研究專責辦公室
 - ▶ Institutional Research, Research and Planning, Institutional Planning, Academia Planning
- ▶ 校務研究辦公室人力配置
 - ▶ UC Berkeley (10), UC Irvine (7), Bastes College (2)
- ▶ 校務研究辦公室人力資源
 - ▶ Computer Science, (Higher) Education, Statistics

如何進行校務研究 – CSU IR Director Recruitment

▶ RESPONSIBILITIES:

- ▶ Provides oversight and supervision for the **institutional research and assessment**, and contributes to institutional planning insuring that meaningful, appropriate/accurate data and supporting documentation are made available to **meet the decision-making needs** of the campus;... Works with others to coordinate and improve systems for assessing effectiveness of campus programs and services, including;... **works with IT on building institutional data warehouse**

▶ PREFERRED SKILLS & KNOWLEDGE:

- ▶ **Doctorate** in a related field preferred, experience in quantitative and qualitative research, **statistical analysis**, and reporting required. Excellent technology skills, particularly with data presentation and analysis software such as **SAS, SPSS, Excel, Access, R**, etc.

▶ SALARY:

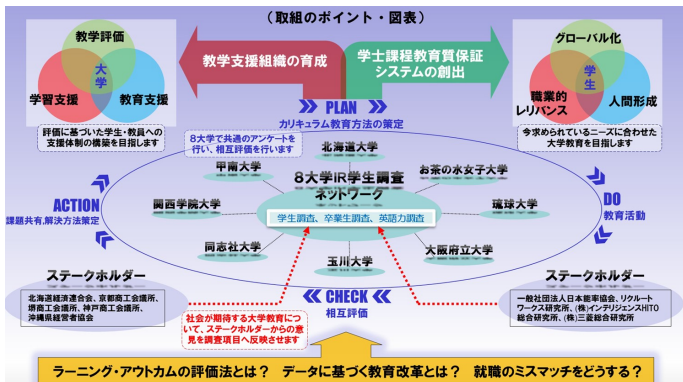
- ▶ The anticipated hiring salary range for this position is **\$85,000 to \$112,000**

日本的校務研究發展

- ▶ 日本於 2004 年以「認證評鑑」與「國立大學法人評鑑」為基礎，展開首次的大學評鑑制度。
- ▶ 2005 – 2011 年為「第一期認證評鑑」實施階段，校務研究的推動與「大學資料庫」(University Portrait) 的建構，為 IR 的前導。
- ▶ 2010 年「大學評價學位授予機構」成立「IR 研究會」，用以宣導 IR 的概念。
- ▶ 2012-2013 年度文部省進行「大學 IR 的調查研究」，並於網路公開該報告書。
(http://www.he.u-tokyo.ac.jp/wp-content/uploads/.../1347631_02.pdf)

日本の校務研究發展

- ▶ 2009年同志社大學、北海道大學、大阪府立大學與甲南大學等4所大學共同成立「4大學 IR 策略聯盟」，結合校務研究與教學來提高教學品質
- ▶ 2012年擴大至 8 所大學成立「教學評價體制 (IR network) 大學課程教育品質保證」，採相同問卷，以「學生調查、畢業生調查、英語調查」為主題

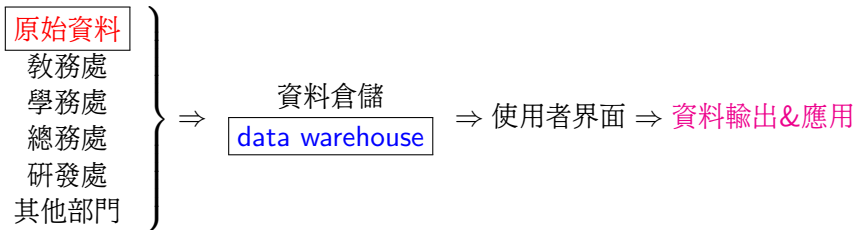


校務研究的資料整合議題

- ▶ 如前面概念篇所述，校務研究包山包海，平時大家也都在進行
- ▶ 但是，和 (相對嚴謹的) 校務研究有何差異？
 - ▶ 資料整合程度
- ▶ 資料是否整合完善攸關於校務研究的效率
 - ▶ 四處要資料、串資料

校務研究的資料整合議題

- ▶ 資料庫整合並不容易
 - ▶ 並非所有資料均進到資料倉儲
 - ▶ 並非所有資料有同樣的編碼 (Big 5 or unicode)
 - ▶ 資料庫管理系統亦可能不同 (MS SQL or Sybase)
 - ▶ 問卷題項與新生報到系統



評估多元入學成效

- ▶ 多種評估方法來檢視推薦甄試 (個人申請、學校推薦、繁星計畫) 以及指定考試等入學管道表現
 - ▶ admission methods vs. academic performance (avg. final grade)
 - ▶ group mean comparison
- ▶ 但是, 和 (相對嚴謹的) 研究有何差異?
 - ▶ regression approach by controlling confounding factors
 - ▶ propensity score matching method (treatment vs. control)
 - ▶ need more data – family background, student engagement
 - ▶ **administrative-level** + **survey data**
- ▶ 可獲致較為可信且精確的評估

國立清華大學教育資料整合計畫

- ▶ 2008 年成立教學發展中心 (CTLTD)
- ▶ 2011 年成立學習評鑑中心 (Center for Learning Assessment Service, CLASS)
- ▶ 增進 (評估) 教師教學、學生學習成效
- ▶ 行政業務 + 研究導向
- ▶ A postdoc allocation, an assistant and me (3)
- ▶ 整合校內教育資料庫進行細緻、嚴謹的政策評估、建議
- ▶ semi-IR – 「準校務研究機構」
- ▶ administrative-level (教務、學務) vs. survey data

清大學習評鑑中心主持之調查研究

- ▶ 2010–2014 畢業生學習回顧調查
 - ▶ 校、系滿意度、教育目標、核心能力、未來發展...
- ▶ 2012–2014 大二學生學習經驗調查
 - ▶ 學習適應、時間分配、上課方式、教育目標...
- ▶ 2013–2014 研究生學習回顧調查
 - ▶ 和畢業生問卷同但多加研究生議題、指導教授...
- ▶ 2011 教師對「教學意見評量調查」之調查
 - ▶ 攸關教學成效甚至教師薪資...
- ▶ 2013–2014 新生報到系統填答高中以及家庭背景資料
 - ▶ 盡量蒐集以避免重複詢問

清大整合教育資料的應用

Example

Examine the outcomes of the Multi-Channel College Entrance System by comparing four different types of students' academic performance

- ▶ (1) School Recommendation; (2) Individual Application; (3) Multi-star Project, and (4) Joint College Entrance Examination
- ▶ Outcome variables include: overall GPAs, semester GPA, # of receiving the University Presidential Award, and whether the students are experienced a half of course credits failed (aka 2-1)

- ▶ Reference: Cheng, Wen and Eric. S. Lin* (2014): "Assessment of Admission Methods on Undergraduate Students' Academic Performance," *Working Paper*, National Tsing Hua University.

進行中或未來的研究

Example

- ▶ Teaching and research – substitute or complementarity?
- ▶ PhD (local vs. foreign students) funding allocation
- ▶ Impact of OCW Usage on Campus/Off-campus Learning
- ▶ Admission Methods on Extra-curricular Activities
- ▶ Admission Methods on Required/selected Courses Learning
- ▶ Evaluation of NTHU Residential College
- ▶ Peer Effects Investigation in NTHU Dormitories
- ▶ Learning effect of English teaching

教育部推廣校務研究概念

▶ 階段一：觀念引進與共識建立

- ① 教務主管 ⇒ 校務主管
- ② 102年公私立大學院校教務主管聯席會議 @ 元智大學
- ③ 103年度校務研究辦公室建置與運作實務研討會
- ④ 高教技職簡訊刊登專訪與實務

▶ 階段二：校務研究辦公室的實踐

- ▶ 研擬補助部分大學建置校務研究辦公室的可行性
- ▶ 設定議題

教育部「校務研究辦公室之建置與運作」

- ▶ 為推廣大學設立校務研究辦公室
- ▶ 提升學校決策品質
- ▶ 招募計畫以「**建立大學生學習成效評估與提升機制**」為主題
- ▶ 計畫書包含 (暫定)
 - ① 計畫目標與研究問題
 - ② 校務機構辦公室人員組成及專業發展規劃
 - ③ **集中式校務數據資料系統建置**與分析規劃
 - ④ 校務數據分析結果之運用與配套措施
 - ⑤ 經費規劃

- ▶ 校務研究提供 empirical evidence 給校方的決策者
 - ▶ 協助大學追求卓越, 確保行政、教學、研究、服務的有效發展與品質保證
- ▶ 優質校務研究可提供有效率的服務
 - ▶ 既有基礎再向上提升
- ▶ 校方應該大力支持校務研究的發展
 - ▶ 即使沒有正式的校務研究機構
- ▶ 我國校務研究的推廣有助於提升校務研究的品質
 - ▶ 校務研究在台灣成爲一門專業

Thanks for your attention!

Comments are welcome!

