

考試科目	產業經濟學	所別	科管所	考試時間	5月24日 星期六	第一節
------	-------	----	-----	------	--------------	-----

答題請儘量輔以圖表或方程式來說明

- 一、 (20%) 政府一定要介入科技發展嗎？請用經濟學的推理方式來分析。
- 二、 (40%) 請解釋以下名詞：
 (1) 囚犯困局，(2) 套牢，(3) 寇斯定理 (Coase Theorem)，(4) 網路外部性，(5) 市場失靈，(6) 規模經濟，(7) 學習曲線，(8) 規模報酬遞增
- 三、 (20%) 假設產業中的每一個廠商有相同的邊際成本曲線 $MC = c$ ，產業的需求曲線是 $P = a - bQ$ 。請問在以下各種市場結構下，均衡的價格 P 、產業產量 Q 、各個廠商的產量及利潤 分別是多少？
 (1) Cournot 雙占 (2) 合作雙占 (3) Bertrand 雙占 (4) Stackelberg 雙占
- 四、 (10%) 強雄的能力樣樣都比麻瓜來得強，他一個小時可以打 1000 字或是賺 1 千元，麻瓜一個小時只能打 200 字或是賺 200 元。請問強雄還需要和麻瓜交易嗎？交易能使雙方得利嗎？請用具體的數字來說明。
- 五、 (10%) 一個企業的「附加價值」(Value added) 如何計算？是由哪幾個部分構成？如何顯示企業是由企業主承擔風險所投資設立的組織？

備 考 試 題 隨 卷 繳 交

命 題 委 員： (簽章) 年 月 日

命題紙使用說明：1. 試題將用原件印製，敬請使用黑色墨水正楷書寫或打字（紅色不能製版請勿使用）。
 2. 書寫時請勿超出格外，以免印製不清。
 3. 試題由郵寄遞者請以掛號寄出，以免遺失而示慎重。

考試科目	科技管理文獻評析	所別	科技管理研究所	考試時間	5月24日 星期六 第二節
<p>一、請閱讀後附資料第一篇文章「Introduction :On the Pragmatics of Management Learning and Education」並回答下述問題：</p> <ol style="list-style-type: none"> 1、請分別摘要文中作者所引介的四篇文章 (10%) 2、請以這四篇的主題引申你對「管理學習與教育」的看法 (20%) 3、請你對管理學習與教育提出一個研究計劃，並闡述應如何進行此研究 (20%) (EDI 是 Essays, Dialogues & Interviews 的縮寫) <p>二、請閱讀後附資料第二篇文章「The Product Innovation Process : Are Managing Information Flows and Cross-Functional Collaboration Key ?」並回答下述問題：</p> <ol style="list-style-type: none"> 1、請分別說明本文作者 Rebecca.Wells，及 Luigi 與 Atuahene-Gima 對「產品創新流程」的看法 (20%) 2、基於本文，及你所了解的產品創新文獻，請提出一個研究計畫，來回答 Managing Information Flows 及 Cross-Functional Collaboration 是否為「產品創新流程」的關鍵? (30%) 					
備考	試題隨卷繳交				
命題委員：	(簽章) 年 月 日				

命題紙使用說明：1. 試題將用原件印製，敬請使用黑色墨水正楷書寫或打字（紅色不能製版請勿使用）。
 2. 書寫時請勿超出格外，以免印製不清。
 3. 試題由郵寄遞者請以掛號寄出，以免遺失而示慎重。

考試科目	科技管理文獻評析	所別	科技管理研究所	考試時間	5月24日 星期六	第二節
------	----------	----	---------	------	--------------	-----

Academy of Management Learning & Education, 2008, Vol. 7, No. 1, 86-87.

Introduction: On the Pragmatics of Management Learning and Education

In my introduction to the EDI Section of Volume 6, Issue 4 (Ashkanasy, 2007), I referred to Giacalone's (2007) recommended remedy for dealing with ethical issues: to take a "red pill" of reality. In this editorial, I continue this theme based on one of the articles in this issue's EDI section, but with a twist. I take my cue this time from the opening essay by Cynthia W. Weick titled, "Issues of Consequence: Lessons for Educating Tomorrow's Business Leaders From Philosopher William James." As readers will quickly see, there is much in common between Weick and Giacalone's essays. In particular, both authors urge us to look beyond the rhetoric; to view life and behavior as it really is, not what we would prefer to see, or what might have been.

Weick's arguments stem from the teachings of William James (1842-1910), an American philosopher and early psychologist whose writings fell into the pragmatic school of philosophy, where the value of an idea is reflected in its usefulness. Weick sets out five themes that she identifies as "seminal" to James's work: "making philosophical thinking accessible; finding truth using the pragmatic method; linking truth and goodness; using pluralism to make better decisions and promote tolerance; and inventing the future." Weick then proceeds to outline how these themes apply in the context of management education, reflected in two especially useful tables: the first, spelling out how James's Pragmatism maps onto business decisions, and the second, describing the types of initiatives business faculties could take to implement James's ideas.

The second essay in this section is by Sharon K. and John M. Clinebell, titled, "The Tension in Business Education Between Academic Rigor and Real-World Relevance: The Role of Executive Professors." The connections to Weick's essay are obvious. The Clinebells deal also with issues concerning the applicability of business education and learning. They focus on one particular issue: the role of executive (or clinical) professors in business schools. The central argument here is that executive professors bring a more grounded approach into business schools, which have become wedded to an overly academic education orientation. In this instance, executive professors bring a sense of realism to business school education. The

Clinebells conclude, however, that executive professors are not always used to their best advantage. To address these shortcomings, they provide a list of nine recommendations for improving the effectiveness of executive professor employment in business schools.

The third essay, by Peter Navarro, is titled "The MBA Core Curricula of Top-Ranked U.S. Business Schools: A Study in Failure?" Navarro takes this idea of practicality and usefulness a step further. According to the evidence he presents in this essay, MBA curricula in top-ranked U.S. business schools mostly still conform to a "functional silo" model. In this model, according to Navarro, learning tends to be directed toward the objectives for each functional course, and achievement of high grades. This is antithetical to the AACSB objective of multidisciplinary integration and the teaching of skills needed in today's competitive global environment, with an emphasis on sustainability and corporate social responsibility.

The fourth and final article in this EDI section, by Joseph A. Raelin, is a dialogue piece in response to Tsang and Frey's (2007) provocative argument that journal editors ought to make a yes-no decision on article submissions. If the editor decides to accept, then the manuscript should be accepted "as is" (i.e., only requiring copy-editing changes). Raelin titles his article, "Refereeing the Game of Peer Review," and argues that, instead of the radical "as is" idea proffered by Tsang and Frey, it may be more practical to try to improve the present peer-review system. The author advocates in particular additional training of reviewers—beginning in their doctoral education—designed to make reviews more developmental and professional.

As readers can see from the four articles in this issue's EDI section, they all address the theme of usefulness. Weick entreats us to adopt a more pragmatic philosophy; the Clinebells argue that business schools can more effectively employ executive professors; Navarro asks business schools to adopt curricula more in line with AACSB teaching objectives; and Raelin believes that a more professional, trained cadre of reviewers is needed. This continues the theme developed in the EDI articles in the last AMLE issue. There is a message for us all here.

考試科目	科技管理文獻評析	所別	科技管理研究所	考試時間	5月24日 星期六	第二節
------	----------	----	---------	------	--------------	-----

RESEARCH BRIEFS

This section of *Academy of Management Perspectives* is intended to present research briefs from disciplines and discourses beyond the Management field that inform our own research on how organizations are managed and succeed.

The Product Innovation Process: Are Managing Information Flows and Cross-Functional Collaboration Key?

Research Brief by Rebecca M. J. Wells, Associate Professor of Marketing, University of Dayton

It goes without saying that successful product innovation is important, if not critical, to the long-term viability of organizations. Consequently, garnering and effectively managing the resources needed to positively influence the product innovation process is certainly worth the time, energy, and investment. The challenge, however, is that the exact nature of those important resources isn't clear. Moreover, we don't fully understand how different resources might actually influence product innovation success to begin with.

In a recent study, Luigi M. De Luca of Bocconi University and Kwaku Atuahene-Gima of the China Europe International Business School used the marketing literature to identify factors relevant to successful product innovation. Their work uncovers some interesting findings about the underlying dimensions of those factors and how they actually influence the product innovation process in a positive way. In doing so, De Luca and Atuahene-Gima offer some clear implications for managers as well as organizational structures and processes.

De Luca and Atuahene-Gima contend that product innovation performance is influenced by three broad factors: market knowledge, cross-functional collaboration, and knowledge integration mechanisms within the company. A firm's infor-

mation about and understanding of its customers and competitors are components of its market knowledge. The extent to which various functional areas (e.g., marketing, R&D, finance) are involved in the product innovation process and the degree to which those areas cooperate during that process are components of cross-functional collaboration. Knowledge integration mechanisms are the formal organizational processes and structures that make it possible to gather, analyze, interpret, and disseminate information throughout the organization. Examples of knowledge integration mechanisms include systems for gathering and documenting market intelligence, regular cross-functional briefings, and standardized processes for analyzing ongoing projects. Generally speaking, product innovation success appears to depend on management's ability to effectively integrate all three of these resources and bring them to bear.

De Luca and Atuahene-Gima also make specific proposals about each of these generic factors. First, they propose that market knowledge is really a multifaceted factor and that to really understand its overall impact requires an appreciation of each knowledge dimension and the role it plays. So if key dimensions of market knowledge are breadth, depth, specificity, and tacitness, it is important to understand the importance and contribution of each one of them to the product innovation process.

De Luca and Atuahene-Gima go on to suggest that the influence of cross-functional collaboration and knowledge integration mechanisms is not well understood. If we assume that product innovation success depends on how well a firm transforms knowledge held by cross-functional teams into new products, then understanding the role of knowledge integration mechanisms be-

考試科目	科技管理文獻評析	所別	科技管理研究所	考試時間	5月24日 星期六 第二節
------	----------	----	---------	------	---------------

comes critical. In fact, the knowledge-based view of the firm implies that these mechanisms are vital to sustainable competitive advantage. Yet how this actually works isn't clear. Structural contingency theory, however, suggests that the flow and sharing of information among functional units help determine the nature of the knowledge integration mechanisms that eventually come into play. The circular nature of these relationships between information flows and integration mechanisms are reminiscent of the long-standing chicken and egg debate—and represent a challenge for managers. So, what comes first? Do managers first establish structures and processes to ensure that relevant market knowledge is captured and promote cross-functional collaboration, with knowledge integration mechanisms (e.g., documentation, meetings, briefings) evolving later? Or do well-designed and orchestrated knowledge integration mechanisms foster efforts to understand the market and promote collaboration across units?

De Luca and Atuahene-Gima argue that our understanding will improve if we look specifically at the dimensions of market knowledge and the effects of cross-functional collaboration on knowledge integration mechanisms. Teasing these factors out first will help us better grasp the roles that management and the allocation of resources actually have in the success of product innovation processes.

In their study, De Luca and Atuahene-Gima surveyed 750 randomly selected high-technology Chinese firms. While previously employed questions and scales were used to measure dimensions of potential contributing factors and innovation performance, the rapidly changing business climate in China may have introduced some confounding issues. To their credit, De Luca and Atuahene-Gima took appropriate steps to assess the reliability and validity of their measures in their selected population.

Based on their results, De Luca and Atuahene-Gima offer us the following conclusions: (a) Market knowledge specificity (i.e., having context-specific information) and cross-functional collaboration positively influence product innovation performance directly through knowledge integration mechanisms; (b) market knowledge

depth (i.e., the sophistication and complexity of information) positively influences product innovation performance through knowledge integration mechanisms; (c) market knowledge breadth (i.e., the "high-level" view of customers and competitors) has a positive, direct effect on product innovation performance; and (d) market knowledge tacitness (i.e., information that is not explicit or easy to come by) has no influence on product innovation performance.

So what do all these findings imply for organizations as well as for the managers responsible for product innovation processes? For managers involved in product innovation, two principal implications come to mind. First, managers should design knowledge integration mechanisms to align with the type (breadth, depth, specificity, or tacitness) of market knowledge used in the product development process. If the firm is guided by a broad understanding of consumers and competitors consistent with a fundamental consumer orientation, then mechanisms to capture and continuously update relevant market intelligence and macro-environmental trends are important. This study, however, suggests that this is insufficient by itself. Deeper and more specific knowledge, which is shared across functional areas, will significantly improve the odds of a successful product innovation process.

Indeed, organizational processes that encourage information sharing (e.g., willingness to share documents, to hold meetings and project reviews, and to use comparable methods of analysis across functional areas) also serve as potential components of knowledge integration mechanisms, and the use of such mechanisms may help facilitate the processes that eventually lead to successful new products. Of course, encouraging information sharing and the development of knowledge integration mechanisms also requires the effective allocation of human and financial resources needed to acquire, analyze, and disseminate market knowledge in the first place.

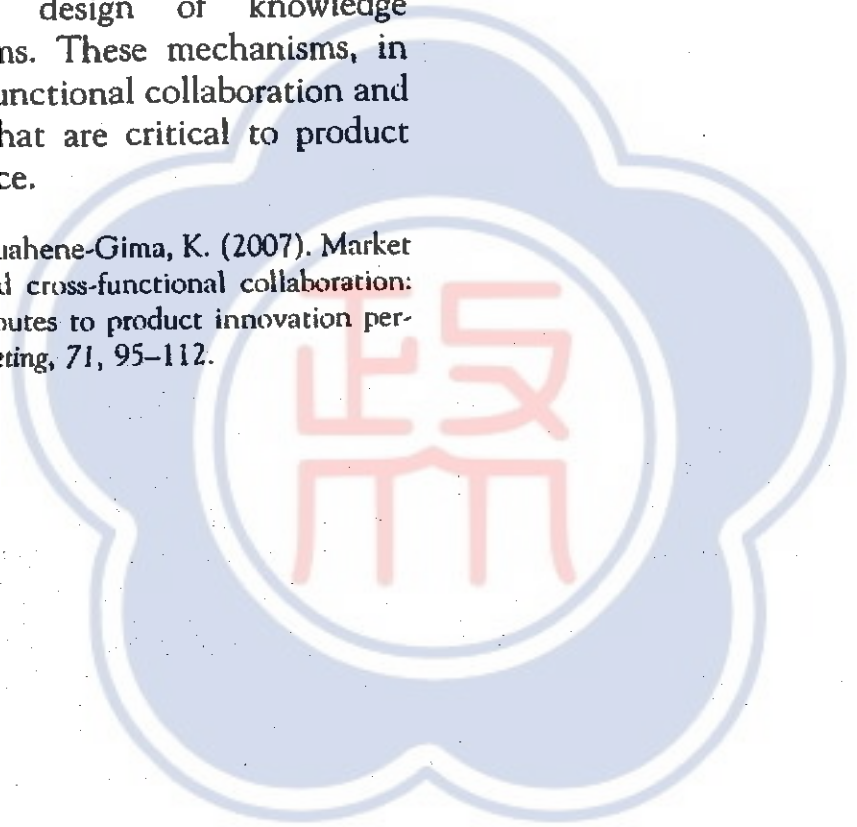
This brings us to the second implication for managers of product innovation processes. Specifically, it is the use of structured and accessible knowledge integration mechanisms that enables the cross-functional collaboration so critical to

考試科目	科技管理文獻評研	所別	科技管理研究所	考試時間	5月24日 星期六	第二節
------	----------	----	---------	------	--------------	-----

product innovation success. Consequently, managers not only need to support and reward cross-functional collaboration, they also need to ensure that the appropriate knowledge integration mechanisms are in place. This, too, requires the effective allocation of human and financial resources.

Together, these implications suggest that managers' understanding of the types of market knowledge critical to product innovation in an organization informs the design of knowledge integration mechanisms. These mechanisms, in turn, foster the cross-functional collaboration and information sharing that are critical to product innovation performance.

Source: De Luca, L., & Atuahene-Gima, K. (2007). Market knowledge dimensions and cross-functional collaboration: Examining the different routes to product innovation performance. *Journal of Marketing*, 71, 95-112.



備	考	試	題	隨	卷	繳	交
命題委員：						(簽章)	年 月 日

- 命題紙使用說明：
1. 試題將用原件印製，敬請使用黑色墨水正楷書寫或打字（紅色不能製版請勿使用）。
 2. 書寫時請勿超出格外，以免印製不清。
 3. 試題由郵寄遞者請以掛號寄出，以免遺失而示慎重。