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大學圖書館館員之領導者-
成員交換關係、創意自我效能與
館員創新行為之關係模式探析
A Study of the Relationship among
Leader-member Exchange, Creative
Self-efficacy and Innovative Behavior of
the University Librarians

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彭于萍

摘要

大學圖書館面臨資訊環境變遷迅速的發展趨勢，特別需要館員展現高度創新行為，以因應環境變化。本研究目的為建構並驗證大學圖書館員創新行為前因及調節變數之關係模式，融合創新研究的兩大理論觀點：社會政治性觀點與效能導向觀點，同時探討領導者-成員交換關係及創意自我效能對館員創新行為產生之直接影響效果與調節效果。本研究以問卷調查蒐集資料，再運用結構方程模式分析方法驗證研究變數間之關係模式。結果發現領導者-成員交換關係與創意自我效能均正向影響館員創新行為，且創意自我效能對領導者-成員交換關係與館員創新行為之間關係具有顯著正向調節效果。最後，針對大學圖書館管理者及館員、圖書資訊系所學者，提出相關管理意涵與建議。

關鍵詞：領導者-成員交換關係，創意自我效能，創新行為，創新，大學圖書館館員

前 言

創新是決定組織績效及存亡之關鍵要素，對於組織效能的重要性已廣被接受 (Han, Kim, & Srivastava, 1998; Yuan & Woodman, 2010)。雖然創新活動對組織績效的影響程度，難以被精確衡量，但創新對組織之重要性已被許多學者經由研究證實 (Agarwal, Erramilli, & Dev, 2003; Drazin, Glynn, & Kazanjian, 1999)。創新在組織中是一種合作及驅使團隊努力的過程 (Burpitt & Bigoness, 1997; West, 2002)。透過創新可幫助員工有效改善工作，得到績效提升、工作滿意、降低壓力與個人成長等預期效益 (Janssen, van de Vliert, & West, 2004)。

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自1980年代開始，在圖書資訊學領域研究中，組織創新議題研究漸受矚目(Willard, 1991)。回顧過往文獻，創新議題研究多集中於營利組織及製造業，但近年國外大學圖書館創新議題研究有日漸蓬勃的發展趨勢(e.g., Brundy, 2015; Jantz, 2012a, 2012b, 2015; Rowley, 2011; Sanches, 2015; Seal, 2011)；不過，無論與其他學科領域或圖書資訊領域研究議題相比，探討圖書館創新議題之研究仍是相對較少(Jantz, 2012b)，故此議題應值得研究者關注。

創新可分為兩種層次，一是由個體產生的個人創新行為，另一則是群體產生的團隊創新。創新歷程環環相扣，是由個人創新延伸至團隊創新，最終影響整個組織創新，亦即組織創新成果乃由個人創新行為延伸而來，個人創新行為可謂組織創新之基礎(Mumford, 2000; Woodman, Sawyer, & Griffin, 1993)，創新的建立必須落實在個人、團體與組織等三個層次(King & Anderson, 1990)。由於組織創新能力來自於個人創新行為活動的累積，員工創新行為對組織之重要性已獲得實證研究支持，有助於組織長期生存與成功(Agarwal et al., 2003; Chang, Hsu, Liou, & Tsai, 2013)。國內外均有研究指出圖書館館員是圖書館推動創新服務成功與否的重要關鍵，圖書館要創新必需激發、培養與提升館員的創造性思考能力，以提供更好的使用者服務，對圖書館創新能力有極大助益(張嘉彬，2006；Bryson, 1990; Foote, 2013; Hughes, 1989; McGrath, 2015)。總結來說，個人創新行為對組織創新之重要性不言而喻，惟目前在國內圖書資訊學領域探討圖書館創新議題之研究中，較著重於團體與組織層次，如：組織創新(陳書梅，2015；陳雪華，2012)、服務創新(何紹華、王培林，2008；呂春嬌、謝順宏，2009)，迄今國內外探討圖書館館員個人創新行為之實證研究尚付之闕如，此議題實有進一步探索之空間，故本研究擬填補此研究缺口，將過往圖書資訊學創新研究焦點由圖書館組織及服務創新層次，延伸至館員個人層次之創新行為，提升圖書館創新研究層次之完整性。

近年來，激勵員工表現個人創新行為之前因研究受到許多研究者的關注(Perry-Smith & Shalley, 2003; Yu, Yu, & Yu, 2013)。為了在多變的全球環境維持競爭力，組織必需仰賴員工創新能力，故了解驅動員工創新工作行為的前因及相關機制，極為重要(Sanders, Moorkamp, Torka, Groeneveld, & Groeneveld, 2010; Schermuly, Meyer, & Dämmer, 2013)。回顧過往員工創新行為研究結果顯示，員工個人創新行為會受其個人認知能力、特質、知識及內在動機(Amabile, 1988; Barron & Harrington, 1981)，與系絡情境因素影響(Noefer, Stegmaier, Molter, & Sonntag, 2009; Woodman et al., 1993)。大多數創新文獻的理論基礎源自於社會政治性(social-political)觀點與效能導向(efficiency-oriented)觀點(Yuan & Woodman, 2010)，因此，本研究企圖融合兩大觀點，因應大學圖書館情境特質，同時探討可能影響圖書館館員創新行為表現之社會政治性因素一領

導者-成員交換關係 (leader-member exchange；以下簡稱LMX)，以及個人效能因素—創意自我效能 (creative self-efficacy)，建構大學圖書館員創新行為前因及調節變數之關係模式。

以影響圖書館館員創新行為表現之社會政治性因素而言，現今由於環境不確定性日漸升高，在今日動態的圖書館服務環境，積極先進的圖書館領導者了解創新意涵，並讓所有館員主動展現技能與創造力，以及如何在圖書館中營造創新氛圍，漸趨重要 (Castiglione, 2008; Jantz, 2012b)。尤其當圖書館領導者無法改變館員人格特質時，應有能力改變本身的管理風格及工作環境，以促進創新歷程 (Castiglione, 2008)。歸納過往創新議題之前因研究可知，領導者對員工績效及創新能力具有深切的影響力 (Judge, Piccolo, & Ilies, 2004; Wang, Fang, Qureshi, & Janssen, 2015)，在圖書資訊領域亦是如此 (e.g., Germano, 2011; Jantz, 2012a, 2012b, 2015; Leong & Anderson, 2012; Sanches, 2015)。而LMX與創新行為的關係機制可應用於領導與組織發展計劃中，降低組織創新歷程的障礙，但過往少有從心理歷程觀點探討LMX與創新行為間關係之研究 (Pieterse, Knippenberg, Schippers, & Stam, 2010; Schermuly et al., 2013)，且在圖書資訊學研究領域中，領導議題研究亦相對較少，期盼藉此研究同時填補以往圖書館創新理論及領導理論之研究缺口，擴增圖書館領導實證研究成果。

另就效能導向觀點而言，創意自我效能是一項影響個人創新行為表現極為重要之前因變數，是指個人在從事特定作業時，認為自己能否具有創造力的自我評價，以及遇到挑戰時能否支持下去的信心，對創意表現或創造性產品具有顯著正向預測效果 (Tierney & Farmer, 2002, 2004, 2011)。在圖書資訊學領域方面，有文獻說明館員創造力的培養，除圖書館應提供訓練機會及鼓勵創造性思考外，館員本身亦應在工作方式及行為上進行改變 (張嘉彬, 2006; Bryson, 1990; Hughes, 1989)，亦有研究提出自我效能是造成館員工作創造力有所差異的影響因素 (Tella & Ayeni, 2006)。因此，本研究擬探討館員創意自我效能程度是否會對其創新行為產生直接正向影響效果，並同時以它作為調節變數，分析它對LMX與創新行為之間關係的調節效果，以了解館員同時在社會政治性因素與個人效能因素對其創新行為之影響下，能否形成更為完整的創新行為模式，研究結果應有助於提供大學圖書館管理者更為全面的人力資源管理策略。整體而言，在圖書資訊學研究領域中，此類議題研究尚屬少見，故期盼藉此研究同時填補以往圖書館創新理論及效能理論之研究缺口，擴增相關實證研究成果。

基於上述研究動機，本研究擬融合社會政治性與效能導向觀點，建構並驗證大學圖書館館員創新行為之前因與調節變數關係模式。歸納研究目的如下：

- (一) 探討大學圖書館館員 LMX 與創新行為之關係。
- (二) 探討大學圖書館館員創意自我效能與創新行為之關係。
- (三) 探索大學圖書館館員創意自我效能對 LMX 與創新行為關係之調節效果。

二、文獻探討與假設推導

(一) 創新行為

創新行為源自於員工產生創意想法的活動，為一多階段的過程 (Kanter, 1996)，不僅僅限於技術性之改變，亦涵蓋執行面之流程與新創意等 (West & Anderson, 1996)，或是對產品或服務提出有用的新想法 (Shalley & Gilson, 2004)。創新行為的體現應包含構想的產生、推廣與規劃執行方案，才能確保創新想法能被有效的實行 (Zhou & George, 2001)。總之，創新行為意指「將有益的創新予以產生、導入以及應用於組織中任一層次的所有個人行動」(Kleysen & Street, 2001)。有益的創新包括新產品構想或科技的發展、為了改善工作關係所作的管理程序的改變，或是為了顯著提昇工作程序效率及效能所應用的新構想或科技。如前言所述，創新對組織及員工均有極大效益，Rubera與Kirca (2012) 進行後設研究，亦發現員工創新行為與組織成功有關。

個人創新行為最常使用之量表有三種。Scott與Bruce (1994) 將創新行為分為三階段，發展六題問項量表。Janssen (2000) 則認為創新行為由產生、推銷與實踐構想三階段構成，故據此發展三構面共九題問項量表。Kleysen與Street (2001) 則回顧之前 28 篇關於創新與創造力的文獻，歸納個人創新行為應涵蓋機會探尋、引發、使之成形的調查、擁護以及應用五大構面，包含：1. 機會探尋：廣泛的探尋以學習及發現更多創新的機會；2. 引發：為了組織、組織成員、產品、工作流程以及服務的成長，所產生有利於其變革的各種行為；3. 使之成形的調查：將各種構想、解決方法與意見加以整理，並透過調查予以試驗；4. 擁護：創新過程中各種社會政治性行為，這些行為對於各種構想、解決方法以及創新的實現都相當重要；5. 應用：致力於使創新成為企業日常運作的一部分。本研究認為 Kleysen 與 Street (2001) 涵蓋創新行為之五構面概念較為完整且周延，故採用其量表作為測量工具。

目前在國內圖書資訊學領域探討創新議題之研究，較著重於團體與組織層次，如：組織創新 (張嘉彬，2006；陳書梅，2001；陳雪華，2012；蔡萬助，2008)、服務創新 (何紹華、王培林，2008；呂春嬌、謝順宏，2009)。

(二) 領導者-成員交換關係 (LMX)

過往研究闡述 LMX 理論發展脈絡及研究現況暨趨勢 (Gerstner & Day, 1997; Rockstuhl, Dulebohn, Ang, & Shore, 2012; Schriesheim, Castro, & Cogliser, 1999)，表示過往領導行為研究以「平均領導方式取向」為主，意指所有部屬面對同一位領導者時，表現的知覺感受都相同，領導者亦對所有成員一視同仁。但 Graen 與 Cashman (1975) 所發展 LMX 理論，以社會交換理論及角色形成系統 (role-making system) 為理論基礎，主張領導者與每位部屬間存在雙元互動關

係，此關係可能由經濟交換行為轉換為社會交換關係層次，其關係品質因人而異。當領導者與部屬之間具有高關係品質時，領導者會期待部屬執行一些非例行性任務，並願意主動負責額外的工作職責任務，領導者亦會給予部屬更多支持，以個人與職位資源（如內部資源、決策影響力、工作彈性、支持與關心），以回報部屬執行非例行性任務之績效。同時，部屬亦願意為領導者付出更多心力，進而影響部屬貢獻心力程度意願的高低，有助於提升部屬工作滿意及工作績效，及組織業務推展與目標任務之達成（彭于萍，2013；Fisk & Friesen, 2012; Graen & Cashman, 1975; Graen, Novak, & Sommerkamp, 1982; Graen & Uhl-Bien, 1995; Markham, Yammarino, Murry, & Palanski, 2010）。

早期圖書館領導議題研究極為不足（Riggs, 1999），Riggs（2001）呼籲圖書資訊學界重視領導議題之重要性，相關研究逐漸出現，以探討領導理論模式居多（Hernon & Schwartz, 2008），Weiner（2003）建議研究者可朝實證研究方向努力。國內相關研究可歸納為下列研究方向，一是以探討圖書館管理應用領導理論之必要性，提出管理建議（胡歐蘭，2005；張慧銖，2009）；二則以探討大學圖書館館員知覺主管領導風格之概念性模式、量化研究或質性研究為主（呂春嬌，2003；陳書梅，2002，2008）；三為其他大學圖書館領導議題之研究（如領導特質、領導效能、領導行為關係研究；呂春嬌、陳雪華、謝雨生，2009；呂春嬌、謝雨生、陳雪華，2009；彭于萍，2013）。歸納以上圖書館領導風格之相關研究發現，研究者選用理論多為關懷體恤/任務建構面向領導行為。本研究擬延伸上述研究，選用著重領導者與部屬互動關係之LMX理論，探討LMX對館員創新行為之影響關係。

近年學者研究結果顯示，若期望創新行為能成功，有創新構想之員工必須尋求可給予必要協助與支援之支持者，來保護與實現創新之構想（Dougherty & Heller, 1994）。Jantz（2012a）提到，所有組織成員應感到被授權可主動建議創新，不僅僅是在自己的工作責任範圍內，亦可建議其他相關的單一或多個單位。而在組織成員在主動發起或追求創新概念時，他們將需要領導者提供組織和心理支持。而當領導者抱持支持態度時，員工應該更有可能產生創造力（Shalley & Gilson, 2004）。因為透過主管支持員工之行為與態度，會建立起主管與員工之間的信任關係，有助於員工不畏風險的提出創新構想（Chandler, Keller, & Lyon, 2000）。當員工提出新構想時，主管須適時鼓勵與讚美，並對員工意見持開放態度，員工才較願意嘗試創新行為（Oldham & Cummings, 1996）。有些研究結果顯示，高度LMX對於創新具有正向影響（e.g., Basu & Green, 1997; Sanders et al., 2010; Schermuly et al., 2013）。綜上所述，本研究提出如下假說：

H₁：當大學圖書館館員知覺LMX關係品質愈高，其展現之創新行為程度亦愈高。

(三) 創意自我效能

社會認知理論 (social cognitive theory) 是由 Bandura (1977) 歸納行為主義 (behaviorism) 與認知理論 (cognitive theory) 兩種觀點所提出。它結合認知 (cognitive)、自我調控 (self-regulatory) 及自我反省 (self-reflective) 的歷程，闡述個體心理歷程是透過個人與環境的決定因素不斷地相互作用所形成 (Bandura, 1982, 1989)。據此觀點，自我效能 (self-efficacy) 是調控個人動機與行為之重要機制。自我效能並非指個人對於某一工作任務具有多少能力，而是個人對於自身是否有能力去執行這份工作的信念，以及對於自身能力與表現的自我評估。Bandura (1982) 進一步指出，自我效能可區分為一般自我效能 (general self-efficacy) 與特殊自我效能 (specific self-efficacy)，特殊自我效能必須在特定的情境或領域之下，方會發生效果，對於個體在特定領域之成就表現具有一定的預測力。

Tierney 與 Farmer (2002) 根據社會認知理論對特殊性自我效能之觀點，融合 Amabile (1988) 與 Woodman 等 (1993) 的創意理論，延伸發展「創意自我效能」之概念，將它視為自我效能在特殊領域的應用。創意自我效能意指個人在從事特定作業時，認為自己能否具有創造力的自我評價，以及遇到挑戰時能否支持下去的信心，屬於創造性任務情境中的特殊性自我效能 (Hsu, Hou, & Fan, 2011; Tierney & Farmer, 2002, 2004, 2011)，而研究發現創意自我效能會對創意表現或創造性產品具有顯著正向預測效果 (Tierney & Farmer, 2002, 2004)。而大多數創新文獻的理論基礎源自於效能導向觀點 (Yuan & Woodman, 2010)，說明個人效能信念對培養其創新能力扮演重要角色 (Ford, 1996; Li & Wu, 2011)，若個人具有一定程度的正向心理特質 (如創意自我效能)，將可展現出創新行為 (Hsu et al., 2011)。Tella 與 Ayeni (2006) 提出自我效能是造成圖書館館員工作創造力有所差異的影響因素。由於具有較高創意自我效能的員工能啟動內在動機、認知資源及行為歷程，去因應情境需求。他們花費更多時間在問題確認與想法整合的創意認知歷程上，也付出更多努力尋求想法落實的方法。因此，具有較高創意自我效能的員工能在遭逢障礙時，成功執行特定任務，並達成組織創新目標，表現較高程度的創新行為 (Bare, Oldham, Jacobsohn, & Hollingshead, 2008; Begetto, 2006; Gong, Huang, & Farh, 2009; Hsu et al., 2011)。故本文提出下列假說：

H₂：當大學圖書館館員創意自我效能程度愈高，其展現之創新行為程度亦愈高。

(四) 創意自我效能對 LMX 與創新行為關係之調節效果

由於創意任務通常為一個結構較為模糊、開放的活動，進行時的策略常是

探索式或頓悟式，所需要的能力、領域知識與智力無確切的邊界與劃分，甚至對於結果也無法預測(Runco & Sakamoto, 1999)。此外，由於個人受到本身如何解讀其成就的影響，遠勝於成就本身(Bandura, 1982)，自我效能會影響個人所作的選擇、渴望的目標、在特定任務所耗費的精力，與遭遇艱難和挫折時能夠堅持不懈的程度，而當遭遇困難時，自我效能信念較強的員工通常能努力堅持下去的程度較高(Bandura, 1991, 1997)，且更有信心、將困難視為挑戰，也可能設定較高的目標與付出更多的努力去克服挑戰(Hsu et al., 2011)。綜上所述，可推論當館員在創新活動遭遇挑戰時，創意自我效能或可形成提供本身願意繼續努力以達成目標之內在動力機制，使之展現堅持下去的信念與表現。

另外，除了受到知識、技巧與能力的影響之外，大部分的創新行為是受到內在動力影響(Amabile, 1988)，這使得領導因素在激勵員工表現創新行為有其重要性。如前所述，若領導者與部屬之間具有高品質LMX關係，領導者會期待部屬執行非例行性任務，例如更多的創新行為，也因此會給予部屬更多鼓勵、支持與關心(Graen & Cashman, 1975; Oldham & Cummings, 1996)，讓部屬亦願意主動擔負此類額外的工作任務，較願意嘗試創新行為。然而，部屬也需要內心感覺到自己有能力，相信自己有能力去達到領導者的期許與要求，再透過創意自我效能的內在動力機制，感受到自己能夠創新，才有可能表現出更多的創新行為表現。因此，當館員擁有較高的創意自我效能時，若與領導者之間具有高品質LMX關係，則領導者激勵這類館員表現較多創新行為表現的可能性較高；反之，當館員的創意自我效能較低時，即使他們與領導者之間具有高品質LMX關係，在領導者要求這類館員表現高度創新行為時，若館員自己都不相信自己有辦法創新，易使他們對本身表現洩氣，領導者要鼓舞這類館員表現創新行為表現實難有效，亦無法增強館員的創新行為表現。故本研究提列下列假說：

H₃：大學圖書館館員創意自我效能對其知覺的LMX與創新行為之關係，具有調節效果（亦即在圖書館員知覺到高度創意自我效能的情況下，其知覺的LMX程度對其創新行為的影響效果較強；在圖書館員知覺的創意自我效能較低的情況下，其知覺的LMX程度對其創新行為的影響效果較弱）。

三、研究方法

(一) 概念性架構

本研究架構如圖1所示。



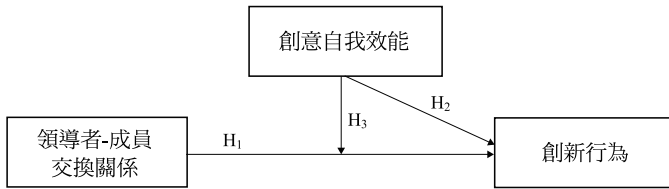


圖1 概念性架構

(二) 問卷設計與研究變數之操作性定義

研究變數題項均以李克特七尺度 (Likert scale) 進行衡量 (1 = 非常不同意 ~ 7 = 非常同意)。以下分述研究變數所使用之量表依據及其操作性定義。

1. 領導者-成員交換關係 (LMX)

本文引用 Graen 與 Uhl-Bien (1995) 發展之量表 (問項共 7 題)，測量存在於領導者與成員間關係之各種向度，說明領導者在資源有限的情況下，會和每位部屬發展出不同交換關係。例如：「我與主管之間的工作關係良好」、「我認為主管了解我工作上的問題及需求」，評估分數愈高，顯示館員認為自己與領導者之間的交換關係程度亦愈好。

2. 創意自我效能量表

本文使用 Tierney 與 Farmer (2002) 編製之 3 題量表，評估出的分數愈高，表示館員創意自我效能強度愈強。衡量問項包含：「我覺得我擅於想出一些新奇的觀念」、「我擅長找出一些有創意的方法來解決問題」等。

3. 創新行為

本文參酌 Kleysen 與 Street (2001) 實證並修正之 14 題量表，測量個人創新行為，定義為「將有益的創新予以產生、導入以及應用於組織任一層次的所有個人行動」。問卷題項包含「我會主動去推動構想並使其有機會被實行」、「當應用新的作業型態於工作流程、技術、產品或服務時，我會設法修正新方法所產生的問題」及「我會將可改善工作流程、技術、產品或服務的新構想，具體實行於每日例行性事務之中」，評估出的分數愈高，則顯示館員個人創新行為程度亦愈高。

4. 人口統計變項

受訪者人口統計變項包含性別、年齡、婚姻狀況、教育程度、職務性質、年資等項目。

(三) 調查對象及程序

本研究計畫主要為探索大專校院圖書館員態度及行為變數之間的影響關係，故以中華民國地區大專校院圖書館員為主要受測對象，採用問卷調查法蒐集資料。為確保問卷題項確切為填答者所了解，邀請數位具備圖書資訊學科背

景之資深大專校院圖書館員，檢視問卷題項並依改善建議修飾問項，最後才正式進行問卷施測。由於本研究採取自評式問卷，為降低共同方法變異（common method variance, CMV）及自我報導偏誤可能造成之問題，影響問卷答題之正確性，參酌彭台光、高月慈、林鈺琴（2006）之作法，問卷編排採用隨機配置法安排各項變數衡量題項，並為避免受訪者潛在的一致性動機，增加反向題設計，作為廢卷排除的考量因素，以降低CMV之影響。本研究針對教育部公布之大學院校一覽表資料所列之公私立大學圖書館進行調查，參考各校圖書館公告之組織職掌資料，以判斷抽樣方式選取館員，利用電話、E-mail及正式公文等多重管道，徵詢各館願意協助發放及回收問卷館員之參與意願，若同意則郵寄問卷，懇請該館員發放給館內所有館員，最後協助回收並寄回問卷。所有問卷於2015年6-7月發放共計1,082份，回收問卷899份，整體問卷回收率為83.09%，剔除無效問卷（包括填寫不完全、答題規律性太高、未認真作答）後，有效問卷共計865份，有效問卷回收率為79.94%。

四、研究結果與分析

（一）樣本結構之描述

在性別方面，女性圖書館員占大多數（81.97%），年齡以31-40歲（34.45%）及41-50歲（35.38%）者為多數（35.38%）；過半受訪者為已婚（60.12%），具備大專或大學教育程度之館員過半（54.68%），研究所以上學歷者亦高達四成多（43.47%）。在職務性質方面，讀者服務館員（39.77%）及技術服務館員（40.35%）約各占四成，兼具讀者服務與技術服務職務館員亦近兩成（19.88%）。在現今圖書館工作年資方面，10年以下館員比例接近半數（46.82%）。

（二）信度與效度之分析

運用Anderson與Gerbing（1988）二階段結構方程模式方法，首先驗證測量模式信度、效度及模式配適度，再以結構模式進行假設檢定分析。

1. 個別信度與組成信度

信度意指評估衡量模型之個別項目信度與潛在變數之組成信度（composite reliability, CR）。表1數據顯示各測量指標之 R^2 均大於0.50，故各面向對其所屬觀察變項普遍具備充分之解釋力；而各面向之組成信度（CR）值均高於0.7（Hair, Black, Babin, & Anderson, 2009），顯示本研究各面向量表具備內部一致性，此即代表本研究使用之量表具備足夠的建構信度。

2. 收斂效度

效度可透過Hair等（2009）所建議的程序驗衡量模型之收斂效度與鑑別效度。如表1顯示，各面向量表之觀察變項因素負荷均大於0.5，且各量表對應之

AVE值均滿足0.50之門檻值(Hair et al., 2009)。故本研究之各項衡量工具乃具有收斂效度。

表1 領導者-成員交換關係、創意自我效能、創新行為驗證性因素分析結果

衡量變項	因素負荷	誤差變異	平均數	CR	AVE
領導者-成員交換關係				0.93	0.65
我知道主管對我的看法及怎麼作才能讓他滿意	0.57	0.68	5.04		
我認為主管了解我工作上的問題及需求	0.82	0.33	4.78		
我認為我的主管認同我的工作潛力	0.78	0.40	5.05		
不論主管實際權力有多大，他都願意幫我解決工作上的問題	0.86	0.27	5.09		
不論主管有多大權力，他都願意幫我脫離工作上的困境	0.86	0.27	4.95		
我對主管有充分信心，如果他不在場，我也會力挺他的決定	0.87	0.24	5.08		
我與主管之間的工作關係良好	0.84	0.29	5.35		
創意自我效能				0.88	0.71
我覺得我擅長想出新奇的點子	0.80	0.37	4.57		
我有信心以我能力用有創意的方法來解決問題	0.88	0.22	5.00		
我有一種本領可進一步發展別人的想法或點子	0.85	0.27	4.70		
創新行為				0.95	0.56
我會探尋可改善圖書館、部門、工作流程或服務等的機會	0.63	0.60	5.57		
我會認同對我的工作、部門、圖書館或與讀者之間產生正向改變的機會	0.63	0.60	5.84		
我會注意工作、部門、圖書館或圖書資訊產業中非例行性工作的議題	0.70	0.51	5.53		
我會針對問題提出構想或解決方式	0.78	0.39	5.63		
我會從不同角度看待問題，以獲得更深入的見解	0.75	0.44	5.62		
我會實驗執行新的構想及問題解決的方式	0.86	0.26	5.60		
我會充份試驗新的構想或問題解決方式，以了解讀者未被滿足的需求	0.83	0.31	5.47		
我會評估新構想的優缺點	0.84	0.30	5.61		
我會嘗試說服他人了解新構想或解決方式重要性	0.78	0.39	5.34		
我會主動去推動構想並使其有機會被實行	0.78	0.39	5.17		
我會冒險支持新構想	0.66	0.56	4.95		
我會作對工作可能有幫助的改變	0.73	0.47	5.70		
當應用新的作業型態於工作流程、技術、產品或服務時，我會設法修正新方法所產生的問題	0.72	0.48	5.65		
我會將可改善工作流程、技術、產品或服務的新構想，具體實行於每日例行性事務	0.74	0.45	5.50		

註1：所有因素負荷估計值(λ)在 $p < 0.05$ 之統計水準下呈現顯著性

註2：組成信度(CR) = $(\sum \text{標準化因素負荷量})^2 / (\sum \text{標準化因素負荷量})^2 + (\sum \text{測量變項之測量誤差})$
(Jöreskog & Sörbom, 1993)。

註3：平均變異抽取量(AVE) = $(\sum \text{標準化因素負荷量})^2 / ((\sum \text{標準化因素負荷量})^2 + (\sum \text{測量變項之測量誤差}))$
(Jöreskog & Sörbom, 1993)。

3. 鑑別效度

表2顯示本研究量表符合鑑別效度，符合Hair等(2009)所建議的標準，對角線部分之AVE方根值皆大於潛在因子之間相關係數。所有因子相關係數皆為正且達統計顯著。

表2 潛在變數之相關係數與鑑別效度分析結果

	1	2	3
1. 領導者-成員交換關係	0.81		
2. 創意自我效能	0.14*	0.84	
3. 創新行為	0.29*	0.61*	0.75

註1：顯著水準 $p < 0.05$ 時，*表示達顯著水準。

註2：對角線之值為潛在變數之AVE值平方根，該值應大於非對角線之值。

(三) 模式之配適度檢定

運用結構方程式模型(structural equation modeling, SEM)進行參數估計與假說檢定，驗證整體模式適合度，以了解因果模式與實際資料間配適度，配適度乃從基本配適標準(preliminary fit criteria)、整體模式配適度(overall model fit)與模式內在結構配適度(fit of internal structure of model)三方面加以評量。其中，整體模式配適度即模式之外在品質，評鑑指標部分，由於沒有單一指標能夠考慮所有情境(Bollen & Long, 1993)，本研究參考West、Taylor與Wu(2012)的建議，利用 χ^2 檢定與RMSEA、NNFI、CFI、GFI、AGFI等適配度指標進行模式適配度檢驗；模式內在結構配適度則指模式之內在品質，評鑑指標包括AVE及標準化殘差值等(Bagozzi & Yi, 1988; Jöreskog & Sörbom, 1993)。

以下說明本研究模式各項配適度指標之檢定結果，其中 χ^2 值達統計顯著性($\chi^2 = 774.97$, $df = 228$, $p < 0.00$)，顯示檢定結果拒絕模型假設，但Marsh、Balla與McDonald(1988)表示， χ^2 值對樣本數敏感，樣本愈大時易拒絕模型假設。而Marsh與Hocevar(1985)則指出 χ^2 值之估計與自由度有關，因此可以NCI值(normed chi-square index; χ^2/df)代替 χ^2 值，且NCI值最好介於2~5之間，以進行模式適合度之評估。本研究模式之NCI(χ^2/df)值為3.40，其他整體測量模式之配適度指標的選擇參考Hu與Bentler(1999)及West等(2012)的建議，結果顯示RMSEA(=0.053)低於0.08之門檻值(Browne & Cudeck, 1992)，而NNFI(=0.99)、CFI(=0.99)數值皆大於0.95，SRMR(=0.055)小於0.08、GFI(=0.93)大於0.90及AGFI(=0.91)大於0.90，符合Hu及Bentler(1999)建議之標準，顯示本研究測量模式之模式適配度良好。

(四) 假設檢定

1. 領導者-成員交換關係(LMX)、創意自我效能對創新行為之主效果檢定

首先針對研究假設一及二進行檢定，主效果結構模式分析結果如圖2所

示。在LMX對創新行為之影響力方面，領導者-成員交換關係對創新行為具顯著正向影響($\gamma = 0.19, t = 6.46$)；創意自我效能對創新行為同樣具有顯著之正向影響($\gamma = 0.66, t = 15.52$)，故研究假設一及二成立。

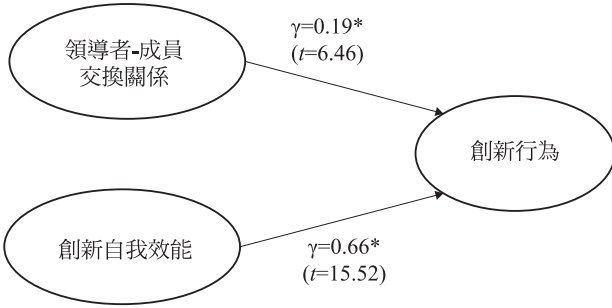


圖2 結構模式-主效果

2. 創意自我效能之調節效果檢定

本文採用結構方程模式多群組方法為檢測方法 (Jurosowski & Gursoy, 2004)，運用 Jaccard 與 Wan (1996) 及 Bell 與 Menguc (2002) 建議之檢測程序驗證創意自我效能之調節效果。受訪者依創意自我效能量表分數區分為高低分兩組，並以卡方差異性檢定比較創意自我效能對創新行為之結構係數在高低分組相同與不同之兩模型，以檢視兩組樣本的創意自我效能對於領導者-成員交換關係與創新行為間之關係，是否具調節效果。

結果顯示：在 LMX 對創新行為之影響力方面，兩組樣本標準化係數均達統計顯著；高群組標準化結構係數較高 (見圖 3)，低群組標準化結構係數較低 (見圖 4)，而卡方差異性檢定 $\Delta\chi^2_{(1)}$ 為 21.23 達統計顯著，顯示創意自我效能對於 LMX 與創新行為之關係具顯著調節效果。由上述創意自我效能調節效果之檢定結果可知，創意自我效能確實在 LMX 與創新行為之間關係，扮演調節變數之角色，故研究假設三成立。

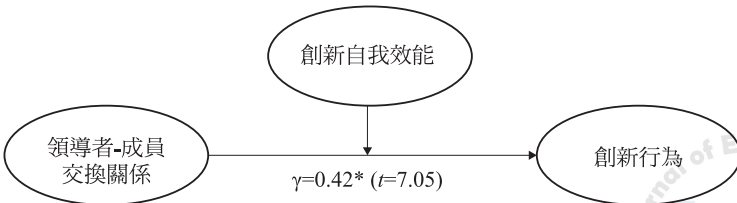


圖3 結構模式-高群組調節效果



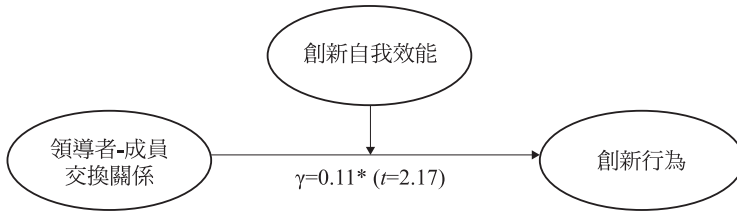


圖4 結構模式-低群組調節效果

此外，考量本研究是以自陳報告的調查方式蒐集LMX、創意自我效能與創新行為之資料，而這些資料均來自於受訪者之主觀認知，可能會存在共同方法變異 (common method variance) 之問題。面對此一限制，本研究應用Harman單一因素檢測法 (Harman's one factor test)，將所有題目以主成分法進行因素分析，並以未轉軸之第一個主成份，檢視潛在共同方法變異量。結果顯示第一個主成份所佔的變異量是42.8%並未過半，表示共同方法變異問題程度屬於可接受範圍內。

四、結論與建議

本研究以國內大學圖書館館員為研究對象，建構及驗證大學圖書館館員之領導者-成員交換關係、創意自我效能與館員創新行為之關係模式，期望藉由證實LMX及創意自我效能對館員創新行為之正向影響，俾使圖書館管理者了解其重要性，在實務面提供圖書館管理者規劃及執行提升館員創新行為之人力資源管理策略的參考，以激勵館員表現高度創新行為，進而獲得提高大學圖書館組織績效與服務品質之效益，以下歸納主要研究結論與建議。

(一) 研究結論

研究假設一及研究假設二之實證結果發現大學圖書館館員LMX正向影響創新行為，而創意自我效能亦對創新行為具有正向影響，與過往在其他產業進行實證研究之結果大致相同。研究假設三結果則顯示創意自我效能對於LMX與創新行為之關係，具有顯著正向調節效果。以上結果說明LMX與創意自我效能認知程度高低不同之館員，其創新行為亦會產生高低程度的差別；更重要的是，創意自我效能可強化LMX與創新行為間之關係，此關係會因館員認知的創意自我效能高低而有明顯差異，意即當大學圖書館員認為本身的創意自我效能程度愈高時，若同時能感受到他(她)和領導者之間的關係品質好時，能表現出最多的創新行為。此研究結果使LMX、創意自我效能及創新行為在圖書資訊學界之相關研究結果更加豐富，提供後續研究者對LMX及創意自我效能在提升館員創新行為上所扮演的角色有更進一步之了解。

(二) 實務管理建議

1. 對大學圖書館管理者之建議

(1) 強化領導者與成員交換關係

Allner (2008) 指出，圖書館管理者若想提升領導效能，須體認本身領導行為會如何影響部屬及其工作績效表現，故若大學圖書館管理者期望館員表現高度創新行為，則應了解本身與館員的互動關係將影響其工作態度及行為，故應投注心力提升領導者與成員交換關係品質。例如建議圖書館管理者可參加人際關係技能訓練課程，培養及提升本身對人際互動關係之敏銳度及相關技能（陳書梅，2008），並提供館員順暢溝通管道，透過內部集會或舉辦聯誼活動增進雙方互動機會，藉此建立情感性基礎，多了解館員的想法與需求，促使館員自發性地為圖書館付出工作要求之外的努力（彭于萍，2013）。更重要的是，圖書館管理者也應表達對館員創新行為表現的支持態度與相關管理措施，提供人事、器材與時間等方面的資源。當館員覺知自己的創新行為能得到組織的關心與支持，通常能激發員工願意投注更多心力於工作上，朝向目標努力以赴，表現較多的創新行為，或可提升圖書館整體服務效能。

(2) 提升館員創意自我效能

依本研究結果分析發現，創意自我效能確實可強化館員 LMX 與創新行為間之關係，當大學圖書館員認為本身的創意自我效能程度愈高時，其創新行為表現程度愈好，若進一步能感受到自己和領導者之間的關係品質愈好時，其創新行為表現程度會更高。Gist 與 Mitchell (1992) 指出，自我效能評估深受內、外在訊息線索及自我知覺控制感之間的交互作用，來決定自我效能的強度，而個體創意自我效能感可藉由某些策略進行改變。例如 Tella 與 Ayeni (2006) 表示圖書館管理者應培植新進館員接受創意力訓練，可提升館員因應組織再生過程及資訊技術的持續性發展之能力。因此，建議圖書館管理者協助館員審視自我能力、鼓勵館員發展自身能力、強化館員完成任務的信心，安排豐富知識學習的機會（如：學位進修、參加學界研討會、安排成長訓練課程）協助提升知能、給予任務表現機會時注意此安排是否與館員興趣符合，適當協助館員設定具特定性及挑戰性之適宜創意績效目標，指派工作任務時應加強與館員之間的溝通互動，可授權館員重新設計工作任務流程，鼓勵館員主動提出新工作創意等，並允許館員嘗試新工作方法等措施，或可轉化與逐步提高館員對本身創意自我效能的認知程度，進而提升其創新行為表現。

(3) 激勵館員表現創新行為

圖書館領導者需要創造一種將創新及創造力成為行為準則的文化（Jantz, 2015），主動進行管理創新（Jantz, 2012a），因此圖書館人力資源管理策略可提供創新想法與建議之優惠措施，有助於營造創新的工作環境氛圍，並可透過各

種組織活動加深館員之組織社會化程度，培養館員對圖書館核心價值與目標、圖書館創新服務發展願景之認同感。此外，由於傳統上非營利服務業員工薪資福利較低，故其工作表現特別容易受到無形的內在報酬影響 (Mirvis & Hackett, 1983)，而圖書館可歸類為施加服務於人們心靈之「非營利服務業」(Lovelock, 1983)，故建議圖書館管理者可提供內在報酬激勵館員，當館員有優異的創新行為表現時，能對其創新行為提供口頭讚許與肯定，亦可更進一步鼓勵館員針對館務提出不同建議方案、導入例外解決方法並增加構想數量等行為，或能激發館員展現更多的創新行為。

2. 對大學圖書館館員之建議

館員亦應適度投注心力培養自身與其管理者之間的關係品質，讓管理者將本身視為有潛力的員工，較易獲得工作資源或情緒支持，或願意撥冗協助解決工作問題。若館員能努力達成工作任務並展現高度創新行為，亦有益於自己在組織中的職涯發展。此外，過往研究指出新進及資深圖書館員應尋求自我效能訓練 (self-efficacy training) 之機會，有助於本身有效運用資訊技術以提供使用者滿意之圖書館服務 (Tella & Ayeni, 2006)。若館員能積極參與館內外提升知能之教育訓練課程及研習會，又能調整工作心態，在工作中充滿自信心樂於接受挑戰，對其創新行為表現應有相當重要的影響。

3. 對圖書資訊學系所之建議

有鑑於以上闡述創新行為之前因及調節變數對於圖書館組織績效及館員個人發展之重要性，建議圖書資訊學系所在未來課程規劃時，應納入相關主題課程於圖書資訊學專業知能架構之中，並設計提升學生創意之教學策略，並融入增進創意自我效能的策略於教學實務中，以培養學生進入職場時應具備之相關知能。

(三) 研究限制與後續研究建議

影響大學圖書館館員創新行為之前因及調節變數繁多，為求純化研究，本研究側重於探討某些前因及調節變數之影響力，後續研究可考慮引進其它可能影響館員創新行為之前因及調節變數，納入研究架構，使整體研究架構更趨完整，並提升館員創新行為模式之解釋力。此外，本研究僅以大學圖書館館員為調查對象，而公共圖書館創新議題亦具探索價值，故或可驗證本模式在公共圖書館情境之適用性。

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A Study of the Relationship among Leader-member Exchange, Creative Self-efficacy and Innovative Behavior of the University Librarians

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Abstract

Turbulent changes of the environment have provided huge challenges for advancement of university librarians. University library leaders require librarians to exhibit higher innovation behaviors to keep up with rapidly changing environments. Drawing from two theoretical perspectives in the innovation literature, the efficiency-oriented perspective and the social-political perspective, the study is to examine how a university librarian's innovative behavior is affected by leader-member exchange (LMX) and creative self-efficacy. The research prepares to conduct a questionnaire survey of university librarians. Based on structural equation modeling of data, this study is to examine the relationships between the above antecedents and moderator of innovative behavior. The finding of this study identified and tested the effects of antecedents and moderator. Results indicated that LMX and creative self-efficacy are positively related to innovative behavior. Findings also indicated that creative self-efficacy was a significant moderator of the relationship between LMX and innovative behavior. Finally, the study provides management recommendations for the librarianship profession.

Keywords: *Leader-member exchange, Creative self-efficacy, Innovative behavior, Innovation, University librarian*

SUMMARY

Introduction

Innovation is the key factor contributing to the performance and survival of an organization (Yuan and Woodman, 2010). In recent years, studies on the innovation of oversea university libraries have increased (e.g., Brundy, 2015; Jantz, 2012a, 2012b; Sanches, 2015), but the number is still relatively low compared to other issues in library studies and relevant academic fields (Jantz, 2012b). Innovation could be discussed at two levels—individual innovative behavior on and organizational innovation (Mumford, 2000; Woodman, Sawyer

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and Griffin, 1993), but few studies have focused on individual innovative behavior on of university librarians. To fill this research gap, in this study. The research focus extends from previous organizational level of innovation to individual level of innovative behavior of university librarians, for enhancing the comprehensiveness of innovation studies on university libraries.

In recent years, studies on antecedents of encouraging individual innovative behaviors have obtained lots of researchers' attention (Perry-Smith & Shalley, 2003; Yu, Yu, & Yu, 2013). Innovative behaviors are influenced by individuals' cognitive capabilities, characteristics, knowledge and intrinsic motivation (Amabile, 1988; Barron and Harrington, 1981), as well as contextual factors (Noefer, Stegmaier, Molter, & Sonntag, 2009; Woodman et al., 1993). Most previous innovation studies have based their theoretical grounds on social-political factors and efficiency-oriented factors (Yuan and Woodmand, 2010). In terms of social-political factors, leaders have a great influence on members' performance and innovative capabilities (Wang, Fang, Qureshi, & Janssen, 2015), so is true in the information and library settings (Jantz, 2015; Leong & Anderson, 2012; Sanches, 2015). However, the leadership issue has rarely been investigated in the field of library and information studies, and it is urgent to have more studies to fill this research gap in innovation and leadership issues in libraries, for expanding the range of studies on library leadership and management. In terms of efficiency-oriented factors, creative self-efficacy is an extremely important antecedent variance that influences individual innovative behaviors (Tierney and Farmer, 2002, 2004, 2011). Previous studies indicate that self-efficacy is the key factor of influencing librarians' work creativity (Tella and Ayeni, 2006). Based on the findings mentioned above, the research goals of this study are listed below.

1. To investigate the relations between leader-member exchange (LMX) and innovative behaviors of university librarians.
2. To investigate creative self-efficacy and innovative behaviors of university librarians.
3. To investigate the moderating effect of creative self-efficacy on leader-member exchange and innovative behaviors of university librarians.

Literature Review and Hypothesis Building

1. Innovative behaviors

Kleysen and Street (2001) define innovative behaviors as producing, channeling and applying useful innovations into any level of individual actions in an organization, and categorize individual innovative behaviors into five dimensions, including five dimensions: opportunity exploration, generativity, formative investigation, championing, and application.

2. Leader-member exchange (LMX)

Graen and Cashman (1975) developed the Leader-Member Exchange theories, advocating that there are reciprocal interactive relationships between a leader and every subordinate, and the quality of each relationship varies with different characteristics of individuals. Jantz (2012a) mentioned that all members of an organization should feel being authorized to actively offer innovative ideas, and when members are initiating and pursuing innovative ideas, they need organizational and psychological supports from leaders. When leaders have been supportive, members are more like to excel their creativity and performance (Shalley and Gilson, 2004). Accordingly, Hypothesis 1 was formed: when there is a higher quality of leader-member exchange perceived by university librarians, they would perform higher level of innovative behaviors.

3. Creative self-efficacy

Tella and Ayeni (2006) indicate that self-efficacy is the factor influencing librarians' work creativity. Members with higher creative self-efficacy would activate their intrinsic motivation, cognitive resources and behavioral processes, for responding to the situational needs. They would spend more time on innovative cognitive processes of identifying problems and incorporating concepts, and put more efforts in seeking methods for realizing ideas. When members with higher creative self-efficacy encounter obstacles, they could execute specific tasks successfully and achieve goals of organizational innovation, performing higher level of innovative behaviors (Begetto, 2006; Gong, Huang and Farh, 2009; Hsu et al., 2011). Thus, Hypothesis 2 was formed: When there is a higher creative self-efficacy of university librarians, they would perform higher level of innovative behaviors.

4. The moderating effect of creative self-efficacy on the relationship of leader-member exchange and innovative behaviors

Most innovative behaviors are influenced by intrinsic motivation (Amabile, 1988). When there is a higher quality of leader-member exchange between a leader and the subordinates, the leader would expect the subordinates to execute non-routine tasks, and thus would give the subordinates more encouragement, support and care (Graen and Cashman, 1975; Oldham and Cummings, 1996); this could make the subordinates more willing to undertake such additional work tasks and try out innovative behaviors. Subordinates also need to feel capable of fulfilling their leader's expectations and requirements, and through the intrinsic motivation of creative self-efficacy they feel capable of being innovative and thus performing more innovative behaviors. Accordingly, Hypothesis 3 was formed: there is a moderating effect of creative self-efficacy on the relationship of perceived leader-member exchange and innovative behaviors among university librarians.

Research Methodology

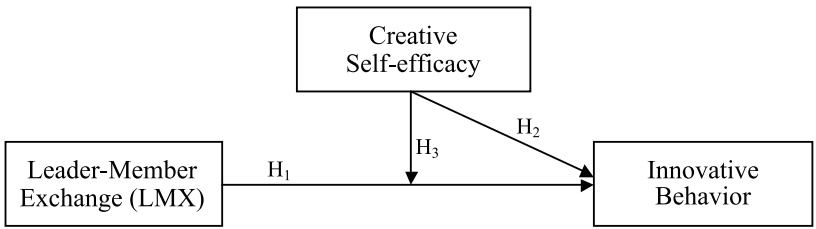


Figure 1 Conceptual Framework

Measurement variables of this study include leader-member exchange (LMX), creative self-efficacy, and demographic variables (such as shown in Figure 1). Methods of data analysis include descriptive statistics, reliability and validity analysis, and structural equation modeling (SEM).

Results and Analysis

Most of university librarians fall into this description—female aged between 31-40 or 41-50, married, educated with a college or bachelor degree. The first stage of data analysis is to verify the reliability, validity and goodness-of-fit of the measurement model. The second stage involves verifying hypotheses with structural equation modeling. The results show that there is a satisfying construct reliability and convergent validity of the measuring scale. From the tests of NCI(χ^2/df), NFI, CFI, it reveals an acceptable goodness-of-fit of constructs in the measurement model. The goodness-of-fit of the structural modeling is also within an acceptable range. H1, H2, and H3 of this study are all supported by the analysis results. Results are as shown in Figure 2, 3 and 4.

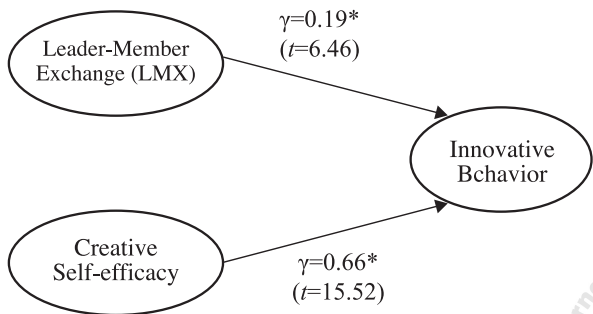


Figure 2 Structural Model—The Major Effect



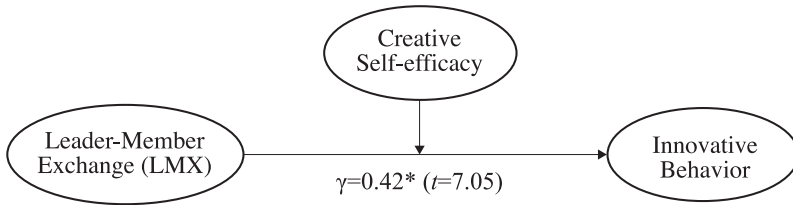


Figure 3 Structural Model—High Group Moderating Effect

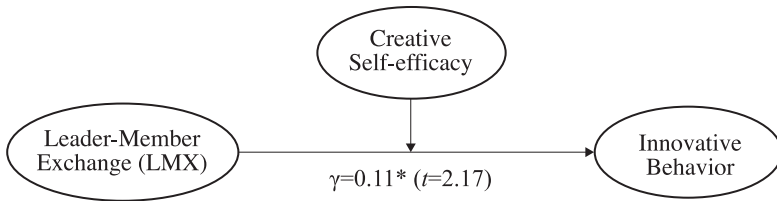


Figure 4 Structural Model— Low Group Moderating Effect

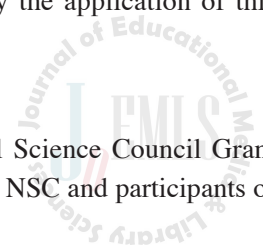
Conclusion and Suggestions

The results of H1 and H2 reveal that both leader-member exchange and creative self-efficacy have positive influences on innovative behaviors of university librarians. The result of H3 shows that creative self-efficacy has a significantly positive moderating effect on leader-member exchange and innovative behaviors, indicating that creative self-efficacy could strengthen the relationship between leader-member exchange and innovative behaviors, and this relationship varies with the levels of university librarians’ perceived creative self-efficacy.

It is suggested that the management level of university libraries should strengthen leader-member exchange, enhance librarians’ creative self-efficacy, and encourage librarians to perform innovative behaviors. It is also suggested that university librarians should seek self-efficacy training and participate in educational training sessions and seminars. It is suggested that departments of information and library science should attend to instructional strategies and practices for enhancing students’ creativity and innovation. Future studies are advised to investigate other antecedents and moderating variables that might influence librarians’ innovative behaviors, and to verify the application of this study’s research model in public libraries.

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