

儒家倫理與華人教育觀：哲學反思、理論建構與實徵研究

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摘要

筆者在師資培育過程中，師資生常抱怨理論與實務的斷裂。主因之一是引用西方理論時，未考慮文化差異。儒家文化圈國家在國際學術評比表現優異，但實徵研究顯示西方理論無法完整解釋東亞學生學習。筆者遂深耕「華人教育觀」研究，經歷哲學反思、理論建構、實徵研究的過程。在哲學反思上，體會絕對真理與近似真理的不同，從發現的研究走向發明的研究；了解科學研究綱領的硬核與保護帶，遂增加輔助假設，以保護硬核；領悟泛文化研究與文化系統研究的差別，從泛文化研究「知其然，但不知其所以然」，走向文化系統研究「知其然，且知其所以然」。從儒家倫理建構「修養的角色義務理論」，指出個人應不斷自我修養，善盡五倫對偶關係中的角色義務，以滿足重要他人的期待。社會大眾以個人努力盡其角色義務的程度，做為評斷其道德修養的標準。角色義務蘊含道德修養境界的提升，又與社會期許的縱向成就目標相連，故努力追求與達成成就目標即是「倫理」與「道德」的顯現。系列實徵研究發現，在縱向目標下：（1）努力的道德性價值說明天道酬勤；（2）失敗者陷入兩難困境：努力則難過，不努力則無道德形象；（3）失敗者產生該繼續堅持的愧疚感與要放棄的絕望感，進退維谷；（4）建立 B3A 模式，說明失敗時反求諸己的心理機制；（5）西方成就動機四象限模式須加上儒家倫理的概念方可解釋我國學生樣態；（6）多數教師同時給學生西方及東方回饋，導致學生陷入是否該繼續努力的兩難困境。研究啟示是：從文化系統研究理解在縱向目標失敗後，學生心理健康欠佳恐是多種兩難困境所致，建議以多元小型金字塔解決單一巨型金字塔的困境。最後，建議研究者從研究缺口找到問題意識，以文化系統進行發明的研究，區辨普同性與文化特殊性的現象。期盼更多學者投入華人教育觀這個尚待開發的園地，為理論與實務的斷裂找出解決之道。

關鍵詞： 哲學反思、理論建構、華人教育觀、實徵研究、儒家倫理

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壹、前言

筆者在師資培育中心服務，在培育師資的過程中，師資生常常抱怨理論與實務落差大，甚而提出「理論無用論」，讓筆者頗感困擾。茲舉兩個例子說明。第一，師資生到中學試教，學生表現出老師期待的行為時，給學生糖果作為增強物，沒想到學生說『好幼稚喔』，師資生應用課堂所學的增強原則，卻未達到預期的效果（符碧真、黃源河，2016），頗感失望。另一個例子，學生數學表現欠佳時，美國老師安慰說：「沒關係，不是每個人對數學都很擅長」（Rattan et al., 2012），但是台灣老師卻常安慰說「沒關係，盡力就好，繼續加油」（Fwu et al., 2022）。這兩個例子凸顯課堂所學與教學實務現場不一樣，呼應了「數學教師培育跨國比較研究」（Teacher Education and Development Study in Mathematics）的研究結果，在參與的十五個國家中，我國中小學教師認為大學所學與中小學教學現場的契合度（coherence），分居倒數第三及第二名（Hsieh et al., 2010），可以為證。

筆者嘗試從以下兩個角度探討前述結果。第一，「技術理性知識論」（epistemology of technical rationality）（Schön, 1983；1995）長期主導師資培育的模式，導致理論與實務之間的鴻溝。這種師資培育模式先由學者以嚴謹的科學方法與程序，發展出教育理論。接著大學將這些理論切割成各門學科，例如教育哲學、教育心理學、教學理論等，傳遞給師資生。而後，師資生將所學理論到教學現場去實踐。事實上，理論是在其他因素控制的情況下，建立變項與變項之間純淨的關係，但現實狀況並不純淨，變因太多，以致變項之間的關係常不如預期，於是產生理論與實務的落差（符碧真、黃源河，2016）。上述第一個實例，對於高社經背景地區的學生而言，糖果或許不稀奇，稱讚可能比糖果是更妥適的增強物。因此，增強原則仍然適用，只是師資生未能區辨情境脈絡的特殊性，造成理論與實務之間的鴻溝。

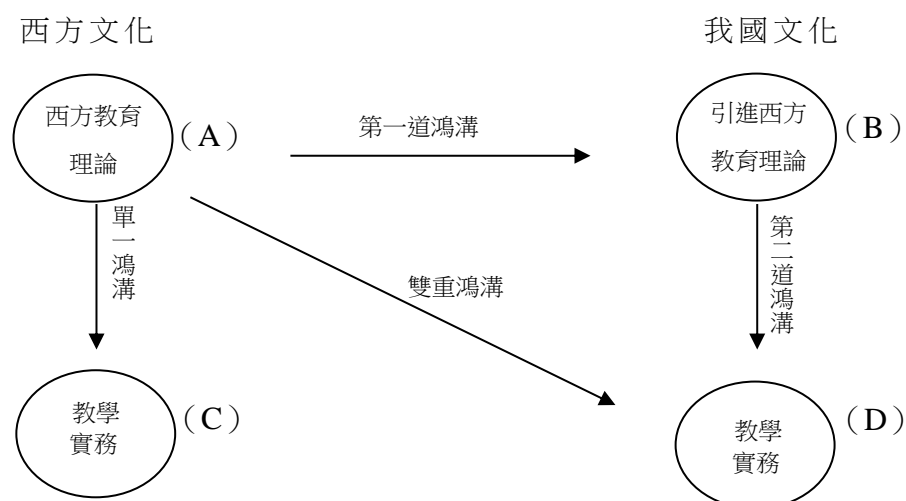
其次，Henrich 等（2010）指出世界頂尖期刊發表的心理學的研究，96%的樣本來自於西方（**W**estern）、受過教育（**E**ducated）、工業化（**I**ndustrial）、富裕（**R**ich）、民主（**D**emocratic）社會的樣本，但是奠基於這些「怪異樣本」（**WEIRD**）的人口，只佔全世界人口數的 12%。Raffaelli 等（2013）亦指出，絕大多數青少年居住在「開發中國家」的「多數世界」（majority world），但是大多數青少年理論卻來自於「西方工業國」的「少數世界」（minority world）。這些學者均指出，西方社會建構的理論能否解釋非西方國家的現象令人懷疑。上述第二個實例，美國與我國老師對學業表現欠佳者的安慰方式有很大的不同，顯見引用「西方工業化國家」「怪異樣本」發展出來的研究結果到我國，便會面臨東西文化差異帶來的鴻溝。

綜上，我國師資生到教學現場，會面臨雙重鴻溝（如圖 1 從 A→D）。首先是東、西方文化差異，西方理論未必全然適用於我國。因此國內學術界直接引用西方理論到我

國文化土壤，便會帶來第一道鴻溝（如圖 1 從 A→B），接著是「技術理性知識論」師資培育模式，帶來理論與實務落差的第二道鴻溝（如圖 1 從 B→D）。雙重鴻溝使得師生感覺大學所學的教育理論無用。

圖 1

引進西方理論到我國教學現場的雙重鴻溝



註：資料來源：取自「實地學習：銜接師資培育理論與實務的藥方？」，符碧真、黃源河，2016，**教育科學研究期刊**，61（2），66 頁。

本文旨在探討第一道鴻溝。以西方「怪異樣本」發展出來的研究典範，盲目移植到非西方國家，對瞭解非西方人們的心態常是不相干、不契合的（黃光國，2009a）。科學哲學家 Popper（1972）指出，當理論與觀察現象不一致時，即是異例（anomalies）。一個理論如果遭遇太多異例，科學家就應提出暫時性的理論或解決方案（tentative solutions），消弭理論與觀察現象之間的不一致。儒家文化圈國家（Confucian-heritage cultures）如台、港、日、韓、新加坡、大陸，屢屢在國際學術評比 TIMSS 與 PISA 表現優異，但香港學者 Hau 和 Ho（2010）在 *Oxford handbook of Chinese psychology* 回顧華人社會學生學習動機與成就表現，指出許多實徵研究結果發現，西方理論無法完整地解釋亞洲國家學生的表現與學習行為。鑑於此，筆者自 2004 年參與「教育部追求卓越研究計劃—華人本土心理學研究」，發現許多西方理論無法解釋華人社會的現象。帶著這樣的觀察，嗣後科技部專題計畫遂深耕「華人教育觀」研究，試圖建構儒家文化脈絡下的理論，解釋我國的教育現象、解決我們自己的教育問題，以減少理論與實務的斷裂。筆者經歷過「哲學反思、理論建構、實徵研究」的歷程，以下分別說明。

貳、科學哲學的啟發

筆者曾上過多次黃光國教授開過的科學哲學的課程，每次都有不同的體會與啟發，提供筆者研究的養分，茲舉瑣瑣大者，說明如下。

一、絕對真理 vs. 近似真理

黃老師是筆者華人教育觀研究的啟蒙老師。記得第一次將研究成果跟黃老師分享時，黃老師說這是“naïve positivism”（素樸實證主義）的研究取向。當時筆者不知道這是褒？還是貶？隨著聽課與討論，漸漸體會「發現」與「發明」的差異。「發現」的研究，其科學哲學是實證主義（positivism），相信上帝創造大自然運作的法則是唯一真理。學者的工作就是努力發現「唯一真理」，採取 bottom up 的方法，就像水桶，以為收集到足夠資料，理論會自然溢出。這種研究取向由證據說話，學者不需要動腦，無法顯現學者的創造力與主體性。相對地，「發明」的研究，其科學哲學是後實證主義（post positivism），係指本體不確知，相信「近似真理」，沒有「絕對真理」。每位學者都可以發揮創造力，提出近似真理，彼此競爭誰的解釋力大。科學研究像是探照燈，由學者說話，採取 top down 的方法，不斷提出問題，用理性思考進行猜測，根據理論推論假設，進而收集資料驗證假設，這樣能把理論的光投向未來，以彰顯學者的主體性（Popper, 1972）。

表 1

發現 vs. 發明之差異

	發現	發明
科學哲學	實證主義	後實證主義
對真理的看法	上帝創造大自然運作的法則是唯一真理。	本體不確知，只有近似真理，無絕對真理。
創造力需求	研究者努力發現唯一真理，真理不會因人而異，無法顯現個人的創造力。	每位研究者都可發揮創造力，提出近似真理，彼此競爭，看誰的解釋力大。
研究方法	bottom up 歸納法，像水桶，收集足夠資料，理論自然溢出。證據會說話，學者不需動腦。	top-down 演繹法，像探照燈，根據理論推論假設後，再收集資料。學者說話，證據不會說話。
研究結果解釋	對研究結果，猜測背後原因。 發現	研究結果驗證推論的妥適性。 發明
研究者主體性	無主體性。	根據理論推論假設，挑戰既有理論，有主體性。

註：資料來源：部分資料取自黃光國，2001，9-11 頁；黃光國，2009b

（一）發現的研究

筆者與同僚早期的研究以師資培育為主軸，屬於「發現」的研究。文獻顯示，英語系國家如美、英、澳，長久以來面臨教師社會地位低落、難以招募素質高的老師、新任老師五年內的流失率頗高等問題。相對地，我國教師社會地位較高(Fwu & Wang, 2002a)、能招募高素質的師資生(Fwu & Wang, 2002b; Wang & Fwu, 2007)、教師的流失率低(Wang & Fwu, 2014)。筆者採用問卷調查、深度訪談等 bottom up 的歸納法，了解師資生想當老師的動機，以及當上老師後，是否會轉換跑道等，相信收集到足夠的資料，證據會說話，便能找出真理。針對研究結果，筆者僅能從歷史文化、政府政策等角度，猜測背後可能的原因，但欠缺驗證的機制。事實上，這樣的研究誰都可以做，結果可能大同小異，無法彰顯出研究者的創造力與主體性。

（二）發明的研究

了解「發現」與「發明」的差異後，筆者試圖轉向「發明」的研究。鑒於東亞學生多次在國際學術評比如 TIMSS 及 PISA 表現優異，但西方理論卻無法完整地解釋，筆者遂與教育領域的王秀槐教授、心理學領域的危芷芬、陳舜文教授，組成研究團隊，進行「華人教育觀」的研究。Chen 等（2009）從華人文化的特性，提出「華人成就目標的理論架構」，指出華人在建構成就目標時，除了考慮西方理論重視的自身興趣外（個人目標），還會考量儒家文化強調重要他人的期許（縱向目標）。這樣的理論架構不但挑戰西方既有的理論，也展現出研究者的創造力與主體性。研究群採取 top-down 的演繹法，根據上述理論架構，推論假設，再收集資料，驗證假設的妥適性。這樣的研究是由學者說話。然要將儒家社會學生的學習解釋給國際學術界了解，頗為不易。十年磨一劍，華人教育觀系列研究自 2014 年起陸續獲得刊登。值得注意的是，研究群提出的研究結果只是近似真理，歡迎其他學者提出不同的理論架構，彼此競爭近似真理，看看誰的解釋力大。

二、 科學研究綱領的硬核與保護帶

Lakatos 提出的「科學研究綱領」，對筆者有相當的啟發。該綱領以「硬核」（hard core）為其基礎理論，無法驗證，是一組具有啟發力的形而上理論或預設，不容改變、不容反駁的。保護帶（protective belt）是學者為了保護其硬核，所提出的「輔助假設」。如果硬核受到反駁，整個研究綱領就會崩塌瓦解。為了保護硬核，增加輔助假設的先行條件，使得研究者只能挑戰保護帶（黃光國，2001，p. 189）。茲以道德觀為例，加以說明硬核。Dworkin（1978）將道德信念（moral beliefs）分成「權利為本」（rights-based）與「義務為本」（duty-based）兩類。「權利為本」強調權利是人類行為道德正確的基本

理由，「義務為本」強調義務是人類行為道德正確的基本理由。Dworkin 又指出，所有的文化都包括個人權利、個人義務、社會目標三者，但是在不同文化，三者的優先次序各不相同，因此各個文化的「硬核」不同如下所述。西方與儒家社會的硬核不同，如果學者全盤移植西方理論到我國社會，未考慮兩者「硬核」的差異，不但對瞭解我國社會人們的心態常是不相干、不契合的，恐怕也只是學術的自我殖民。

（一）西方個人主義下的硬核

西方社會的硬核包括：生命的來源是上帝，以及個人權利。西方基督教的宗教傳統預設世界是由上帝所創造的，上帝依據自己的形象創造了人類，因此個人生命的來源是上帝。既然人們都是依據上帝的形象所創造，人人生而平等（*All men are created equal*），所以每個人都有獲得相同機會的權利，是Dumont（1985）所稱的「平等觀」。基於這個預設，「自我」有其邊界，應該受到保護，成為西方個人主義的特色。「個人」是社會群體中行動的自主單位，社會是個人的集合體。「個人權利」重於個人義務及社會目標（Bedford & Hwang, 2003）。例如「生命、自由、財產」是人類不可剝奪的天賦人權，不因任何人事物而變動，具有「普遍性」與「永久性」。其次，基於「自主的倫理」（*ethics of autonomy*），個人有權利根據自己的意志、價值、渴望，自己做主，而非受制於他人外力。個人在選擇目標及達成目標的方法上有最大的自由，這是發展個人興趣的最佳方法。自由是個人主義社會的重要成分，因為個人需要以自己的方式，自由發展個人的天份與潛能（Bedford & Hwang, 2003）。綜上，這些權利的特點是：（1）在「個人層次」上談；（2）權利是人人平等，權利享有的正當性具有普遍性（*universality*），不會因為任何條件有所變動。

（二）儒家社會關係主義下的硬核

儒家社會的硬核包括：生命來源是父母，以及個人的角色義務。儒家社會的道德系統以「角色倫理」（*role ethics*）為主軸，這可溯及儒家文化傳統。《孝經·開宗明義》：「身體髮膚，受之父母，不敢毀傷，孝之始也」，指出個人的生命來源是父母，親子之間有尊卑的關係。其次，儒家社會強調關係主義（*relationalism*）（黃光國，2009a），「個人義務」與「社會目標」優先於「個人權利」。在關係主義的脈絡下，人自出生即置身於各種人際關係的網絡之中，與網絡中「對偶關係」（*dyad relationship*）的「重要他人」（*significant others*）建立緊密關係（Hwang, 2000, 2001）。同時針對各個特定的對偶關係，人們應符合重要他人對自己角色期待，不斷地自我修養，善盡自己的角色義務。傳統儒家是以「道德」的高低作為評比人的階序，人們要努力自我改進與修養品德，朝向「士希賢，賢希聖」的目標邁進，此類似Dumont（1985）所稱的「階序人觀」¹。

1 Dumont的階序人觀係指印度的種姓制度，依潔淨程度將人分成不同等級。

例如在父子的對偶關係中，須「父慈子孝」，即父母的角色義務是慈愛，子女的角色義務是孝順。在君臣的對偶關係中，須「君仁臣忠」，即君王的角色義務是仁厚，臣子的角色義務是效忠。顯見父、子、君、臣不同角色，義務各不相同，都要不斷地自我修養，盡到自己的角色義務。這些義務的特點是：（1）在「人際關係」上談，而非個人層次上談；（2）針對特定關係對象以及尊卑地位，角色義務有不同，不具普遍性，而是具有特殊性（particularity）。

三、 泛文化研究 vs. 文化系統研究

Hwang（2014）提出「泛文化向度」（pan-cultural dimensions）及「文化系統觀」（cultural system）兩種研究取向。對非西方學者而言，了解兩種研究取向的差異頗為重要。泛文化向度研究取向以西方主流心理學理論為核心，而後發展工具，測量跨越許多文化群體而在量度上有相等的心理構念。例如 Hofstede（2011）的文化維度理論（cultural dimensions theory）作為跨文化比較的架構，包括六個向度。最廣為引用的向度是個人主義（individualism）／集體主義（collectivism），英語系國家如英、美、澳在這個向度上屬高分群，相反地，香港、塞爾維亞、馬來西亞、葡萄牙為低分群，被視為集體主義。這種取向雖然能累積許多瑣碎的實徵研究成果，卻使得非西方文化的面貌模糊，喪失其文化的可辨認性（cultural identity）（Hwang, 2014）。「文化系統觀」研究取向則是指最早把這個系統提出來的人，他的整套觀點和想法。例如儒家的文化系統，就要回到孔子當年是怎么闡述的。後來的人對這個文化系統所作的解釋，是在某一個特殊的社會文化條件之下，對原來的文化系統解釋。

（一）泛文化的研究取向

筆者參加 2023 年在香港舉辦亞洲社會心理學會，大會主題演講之一 “Cultural Defaults in the Time of the Coronavirus: Lessons for the Future”，主講人為 Stanford 大學的 Hazel Markus 及 Jeanne Tsai，以及 Kyoto 大學的 Yukiko Uchida。他們以「獨立我」（Independence）vs.「相依我」（Interdependence）二元對立的概念，研究新冠疫情期間戴口罩行為的差異，結果發現傾向獨立我的美國人不願意戴口罩，而傾向相依我的亞洲人願意戴口罩。這樣的研究顯示 WEIRD 樣本者為「獨立我」，其特徵清楚、明顯。反之，與 WEIRD 不同者皆被歸類為「相依我」，其特徵則較為模糊。可惜的是，這種泛文化研究取向只是說明兩種不同研究對象，在戴口罩意願的差異（what），但未進一步解釋為何傾向相依我的亞洲人願意戴口罩（why）。換言之，這種研究取向去脈絡化（decontextualize），對亞洲人願意戴口罩「只知其然，卻不知其所以然」。

（二）文化系統的研究取向

筆者在前述同一個研討會發表論文，從儒家倫理的角度探討角色義務與權利的關係。研究結果指出，比起未盡義務的父母，盡到照顧、養育子女義務的父母，有較高的權利要求子女選擇父母希望的學系就讀，凸顯盡到角色義務者，方能享有權利（Fwu et al., 2023）。會中西方學者回饋表示，這個現象隱含著華人社會的青少年不像西方青少年般的獨立自主，要聽父母的決定，比較不是獨立我，而是相依我。事實上，WEIRD 與 Non-WEIRD 採取的知識論（或稱認知論）不同。因此，WEIRD 以其知識架構看待 Non-WEIRD 的現象，會覺得很奇怪；同樣地，Non-WEIRD 以其知識架構看待 WEIRD 的現象亦會覺得很奇怪。Hwang（2014）提出文化系統的研究取向，建議從文化系統的角度進一步探討為什麼會有某種現象。鑑於此，Non-WEIRD 研究者或可先從前人跨文化比較的結果切入，找出與 WEIRD 樣本不同的現象，而後以文化系統觀，例如用儒家倫理觀，解釋儒家社會為何會有與西方不同的現象。如此一來，對於研究結果「不但知其然，也知其所以然」。

參、理論的建構

實徵研究結果要放在理論的脈絡下，才能彰顯其意義。筆者採取「文化系統觀」，從儒家的文化系統建構「修養的角色義務理論」(role obligation theory of self-cultivation)，以解釋後續的系列實徵研究。以下先說明儒家文化系統，再說明修養的角色義務理論，為下一節的「華人教育觀」奠定基礎。

一、儒家文化系統

人在社會中面臨五種基本的人際關係，即夫婦、父子、兄弟、君臣、朋友關係，稱為五倫。其中父子、夫婦、兄弟為家人的關係，君臣、朋友為家庭外的關係。其他的人際關係會以「擬家人」的關係呈現。例如古代百姓對州、縣的官員，尊稱為「父母官」，現今對縣市首長的稱呼亦然。家人有父母兄弟姐妹，為了匹配這些稱謂，從師父衍生出師母、師兄、師弟、師姐、師妹；朋友的父母，稱為伯父、伯母；密友稱為情同兄弟或親如姊妹；同學之間，高年級者稱為學長、學姊，低年級者稱為學弟、學妹。

先秦儒家的「庶人倫理」強調「相對倫理」，是人人皆須遵守的人際倫理規範。個人依自己的名與分，發自內心、自然地去實踐「禮」的規範，盡自己的義務（楊祖漢，2019），也就是《論語·顏淵》所言「君君，臣臣，父父，子子」。孟子延伸君臣、父子的人倫關係，《孟子·滕文公上》提出君臣、父子、夫婦、兄弟、朋友等的五倫對偶說，即「父子有親、君臣有義、夫婦有別、長幼有序、朋友有信」。此五倫明確規範各種對

偶關係應有的行為準則，即父子之間要相互親愛，君臣之間要有禮義，夫婦之間要內外有別，兄弟之間要有尊卑之序，朋友之間彼此要有誠信，以期「合宜」地相處。《禮記·禮運篇》說：「父慈子孝，兄良弟弟，夫義婦聽，長惠幼順，君仁臣忠，十者謂之人義」。「相對倫理」基於「仁」與「禮」，「父、兄、夫、長、君」等地位較尊者會發自內心，很自然地不斷地修養自己，先善盡「慈、良、義、惠、仁」等的角色義務，而「子、弟、婦、幼、臣」等地位較卑者為回報較尊者，也會很自然地竭盡心力修養自己，善盡「孝、悌、聽、順、忠」等的角色義務（黃光國，2009a）。如果未善盡角色義務，便會愧對重要他人。

由於重要他人的期待會不斷提升，永無止境，因此個人應不斷地修養自己，盡其角色義務，以臻至善（self-perfection）（Chan, 2014）。這呼應了《禮記·大學》：「湯之，《盤銘》曰：苟日新，日日新，又日新」，意指在行為上要不不斷去惡從善，在道德修養上要不不斷進步，精益求精，每天都是一個新的自我。同時也呼應了《禮記·中庸》：「射有似乎君子，失諸正鵠，反求諸其身」。《孟子·離婁上》：「行有不得者，皆反求諸己，其身正而天歸之」。《孟子·公孫丑上》：「射者正己而後發，發而不中，不怨勝己者，反求諸己而已矣。」皆是指人們如有缺失或不足，不要去怪罪或埋怨他人，而要反求諸己，抱持著「天行健，君子以自強不息」的精神，不斷自我修養，自我改善，才能日臻完善。

二、修養的角色義務理論

筆者等從前述儒家文化系統，建構「修養的角色義務理論」（role obligation theory of self-cultivation）（Fwu et al., 2021, 2022）。人自出生即置身於五倫關係中，應善盡各種對偶關係中的角色義務，以滿足重要他人的期待。社會大眾會以個人努力盡其角色義務的程度，做為評斷個人德行的重要標準，且德行能夠彰顯個人的道德修養。簡言之，其中的推論是「努力追求重要他人期待的目標→善盡角色義務→彰顯個人德行→增進內在道德修養」（符碧真等，2021）。從個人層次來看，個人愈努力善盡角色義務，愈能彰顯自身的德行以及道德修養。愈盡到角色義務者，愈能獲得高道德評價（morally upright），也愈符合庶人倫理（ethically correct），愈對得起自己及重要他人，愈感到心安理得，最終達到心理社會均衡的狀態（psychosocial homeostasis）。行有不得，反求諸己。未盡角色義務者，獲得的道德評價低，也會覺得愧對自己及重要他人，無法達到心理社會均衡的狀態（符碧真等，2021）。另從社會層次來看，如果每個人在對偶關係中都扮演適當角色，盡到該角色的義務，便能維持人際關係的和諧，建立和諧的社會。

五倫關係中，最重要的是一輩子無法切割，有血緣的親子關係。「父慈、子孝」是親子雙方各應履行的角色義務（Hwang, 1999, 2012）。父母視子女為生命的延續和未來

的希望，盡其「慈愛」的角色義務，竭盡心力提供最佳的資源，照顧與教養子女，幫助他們達到社會期許的目標。另一方面「養不教，父之過」，父母藉由獎懲的社會化過程，督促子女盡其角色義務，以達到社會期許的目標。子女為回報父母的犧牲與付出，盡其「孝順」的角色義務，努力追求社會期許的目標，「揚名聲，顯父母」，以滿足父母的期望。在東亞社會或儒家文化圈中，子女努力追求社會期許的目標，常是為了善盡其在親子倫理關係中孝順的角色義務，如此可彰顯個人的德行，並增進個人的內在道德修養。如果行有不得，則需反求諸己，是否已善盡角色義務。如果未善盡角色義務，便會覺得愧對自己與父母。因為角色義務蘊含道德修養境界的提升，又與社會（父母）期許的成就目標相連，故努力追求與達成成就目標即是「倫理」與「道德」的顯現。

三、修養的角色義務理論在成就目標的適用範圍

筆者與研究群將儒家社會追求的成就目標，分成「縱向目標」（vertical goal）與「非縱向目標」（non-vertical goal）兩種（Fwu et al., 2016, 2017b）。「縱向目標」係指是社會期許的目標，個人在縱向「成就金字塔」（achievement pyramid）上努力往上攀爬，以滿足父母的期待，光耀門楣（Chen et al., 2009）為其主要的成就動機。這個概念類似古代學子從通過縣、府、院的「秀才」，到各省的「舉人」，再到京師的「貢士」，最後通過皇帝的親試，成為「進士」，往上層層爬升，取得功名，任官職，光宗耀祖。放在現今的脈絡下，縱向目標像是在學業獲得好成績、考上好學校、找到好工作、獲得好名聲等社會期許的目標。相反地，非縱向目標的社會期許較低，類似西方社會「自主的倫理」，根據個人自主的內在動機所追求的目標，像是在運動、才藝等領域的發展等。與非縱向目標相比，縱向目標具有父母期望高、社會重要性高、義務性高、同儕競爭強、自我選擇性低的特點（Fwu et al., 2016, 2017b），具有文化特殊性。探討華人教育觀時，如果直接將西方根據自主內在動機的理論應用到儒家社會，未能區辨這兩種成就目標，則難窺華人學生學習的全貌。

筆者認為「修養的角色義務理論」僅適用於縱向目標，而不適用於非縱向目標。這是基於前述拉卡托斯「科學研究綱領」中「硬核」的概念。「修養的角色義務理論」是筆者系列研究的硬核，為了保護「硬核」，遂增加成就目標類型的輔助假設，僅適用於縱向目標。例如子女努力用功讀書，追求縱向成就目標，是善盡自己孝順的角色義務，一方面彰顯個人的德行，提升自己的道德修養，另一方面符合倫理規範，無愧於己與父母，心安理得，達到心理社會均衡的狀態。倘若行有不得，例如學業表現欠佳時，則應反求諸己，是否已經盡到努力用功讀書的角色義務。如果未盡己，則會感到愧對自己及父母，力求自我改善。值得注意的是，父母對縱向目標的標準會不斷提高，力求好還要

更好，因此子女即使暫時達標，仍然必須不斷地修養自己，更上層樓，不得停歇。相對地，追求非縱向目標則較少角色義務的約束，也較與道德修養及愧疚感無關。

肆、華人教育觀

為便於說明下一節實徵研究的結果，本節先說明西方教育觀，再說明華人教育觀。藉由對比兩者的差異，彰顯華人教育觀的特殊性。

一、西方教育觀

（一）教育的意涵

西方社會強調個人的生命來源是上帝。英文“gift”一詞有「禮物」與「天份」兩種意思，隱含著造物者「上帝」賜予每個人的「禮物」，就是他的「天份」。英文“education”教育一詞是由拉丁文名詞 *educare* 蛻變而來。而 *educare* 又出於動詞 *educere*，由 *e* 和 *ducere* 兩字組成。*e* 在拉丁文中的意義為「出」，*ducere* 為「引」的意思，教育就是要將上天賜予個人的天份引出來，使其天份得以充分發揮。這呼應了 Covington（1992, 1996, 1998, 2000）「自我價值成就動機理論」（self-worth theory of achievement motivation），指出個人的價值（human value）等同於個人達成目標的能力（ability to achieve），而了解自我價值最主要的方式，就是瞭解自己能力的高低。個人可能在學術領域較有天份，也可能在藝術領域較有天份，沒有主副之別。不論在哪個領域，教育的過程都在鼓勵個人朝向其有潛力的方向發展，隱含西方社會較能接受多元發展的價值。

（二）能力本質觀與能力歸因

在此脈絡下，Dweck 和 Leggett（1988）提出「內隱理論」（implicit theory），指出人們對個人特質（trait or quality）（包括智力或能力）的可變或不可變，分成本質觀（entity theory）與增進觀（incremental theory）兩種。本質觀相信人們特質不可變，但增進觀相信人們特質可變，可透過努力改變個人特質，隱含著努力是個手段，因此具有工具性價值（instrumental value）。Weiner（1986）「歸因理論」（attribution theory），以內/外在、穩定/不穩定、可控制/不可控制等三面向，將成敗歸因分成能力、努力、運氣、工作難度等。能力屬於內在/穩定/不可控制的因素，努力屬於內在/不穩定/可控制的因素，兩者互斥。跨文化研究顯示，在內隱理論方面，西方人傾向採取「能力本質觀」（entity theory of intelligence），認為個人的能力是不可變的（Dweck, 1999）；在歸因理論方面，指出美國人傾向採取能力模式（ability model）（Stevenson & Stigler, 1992），將學業成敗歸諸於能力，而能力屬於內在/穩定/無法控制的因素。

（三）自我增進、能力與努力互補關係

鑒於西方人傾向認為能力是天生的，無法改變，因此家長在養育子女的過程中，教師在教育學生的過程中，鼓勵個人朝向有天份、有能力的方向發展，就會有優異的表現，強化了能力本質觀。人們傾向對成功者，稱讚其天份、能力，目的在幫助孩童在自己擅長的領域「自我增進」（self-enhancement）（Kitayama et al., 1997），以提升其自尊或自我概念，建立其自信心。西方觀點認為稱讚一個人聰明、能力好（praise ability），就是稱讚人（praise person），是對當事人的恭維。相對地，稱讚一個人很努力（praise effort），視同稱讚努力的過程（praise process）（Dweck, 1999, 2000; Kamins & Dweck, 1999; Mueller & Dweck, 1998），但這種稱讚隱含著他不夠聰明、能力欠佳的意思，不是稱讚人。Folmer 等學者（2008）從發展心理學的角度，檢視 5-15 歲學童面對失敗時，對能力與努力關係的看法。結果發現，兩者之間的關係，由幼童時的正相關轉變為高年級時的負相關，且此轉折頗為穩定。幼童將能力與努力兩者混在一起，解釋成為聰明的小孩會用功。年紀較長的學童則認為兩者是相反的概念，認為能力高者不需要太多的努力，即可獲得高成就；要很努力才能得到高成就者，隱含著不夠聰明、能力欠佳。因此對較長的學童而言，稱讚努力，非但不是恭維，反而可能是種諷刺或挖苦。

（四）心智導向

呼應前述西方人重視天分的認知能力，Li（2012）在其「學習的文化基礎：東方與西方」一書中指出，西方社會認為學習是心智導向（mind-oriented），旨在學習外在世界的知識（understand the world）。學習過程中，大腦的心智活動包括：主動參與（active engagement）、探索與探究（exploration/inquiry）、批判思考（critical thinking）、溝通表達（self-expression/communication）。「主動參與」係指學生要主動參與學習的過程，包括閱讀、找資料、實驗、撰寫報告、參訪等；「探索/探究」係指學生要找出研究問題，進而動腦、動手實際去探索，找出解決問題的方法；「批判思考」係指學生不只是追求知識，更要對獲得的知識抱持批判、懷疑的態度，追求真理。經由主動參與、探究與批判思考過程所獲得的結果，有賴口語或書面溝通表達出來。

（五）努力的道德性



儘管西方社會重視認知能力，但也有重視努力的傳統，主要是受到基督新教「上帝預選說」（predestination）的影響。「上帝預選說」主張上帝決定哪些人會上天堂，哪些人會下地獄。個人是不是上帝的選民，早在出生前就已經由上帝預先選定，個人無從左右自己的命運。個人唯一能做的事，就是日以繼夜地勤奮工作，累積財富，以及過著克勤克儉的生活來「榮耀上帝」，以證明自己是上帝的選民，獲得救贖（Weber,

2001)。時至今日，基督新教的「工作倫理」(Protestant work ethic)強調透過辛勤工作及節儉，獲得財富與成功，是個人的義務與責任，因此具有道德性的價值(moral worth)(Weiner, 1994)。在非宗教的世俗世界(secular world)，努力不懈的勞動被視為一種美德，這種信念在歐陸及北美頗為盛行(Weber et al., 2002)。

二、華人教育觀

學者用「泛文化的研究取向」，以西方理論為基礎，將非西方社會學生的學習與表現套在西方理論的架構下，進行跨文化比較研究。例如跨文化比較研究顯示，在內隱理論方面，東亞學生傾向採取「能力增進觀」(incremental theory of intelligence)，認為個人能力是可變的，可以透過努力而改變(Dweck et al., 1995)；在歸因理論方面，東亞學生傾向採取努力模式(effort model)，將學業成敗歸諸於努力(Stevenson & Stigler, 1992)努力屬於內在／不穩定／可控制的因素。但是如果以「儒家的文化系統觀」來看這些結果，則會有不同的解釋。

(一) 教育的意涵

華人社會對教育的意涵與西方不同。「教」的甲骨文字形為，左上原作兩個「乂」，代表運算或卦符，左下是一個頭大身體小的小孩形象，右邊是一隻手拿著棍棒的形象。簡言之，就是大人拿著棍棒教小孩學運算。古代嚴師出高徒很生動地表現在「教」的字形上。「育」的甲骨文字形為，上方是女性，下方是小孩的形象，意指女性產子。許慎《說文解字》：「教，上所施，下所效也；育，養子使作善也」。「教」意指學識處於高位的先知者傳授知識技能，學識處於低位的蒙昧者學習模仿，以獲得知識技能；另一方面輩份高者表現出良好的行為，輩份低者模仿、效法。「育」意指養育子女或培育年輕人做好事或成為善良的人。足見西方教育強調引出上帝賦予學習者的潛能，與心智有關；華人教育強調學習知識與培養學習者的善行，顯示除了知識之外，也與品德密切相關。

(二) 義務觀與盡己歸因

前述Dweck和Leggett(1988)的內隱理論，聚焦於個人「質變的可能性」(the possibility of changing trait)，但從儒家「修養的角色義務理論」來看，在社會期許的縱向目標如學業表現，「質變不但可能」，而且「質變是個人的義務」(the obligation of changing trait)。因此，儒家社會的自我不是固定不變的。相反地，自我不但可以改變(possible)，而且一定要變(obligatory)，更要不斷地自我修養朝至善的方向改變(the ultimate good)，永無止境(Fwu et al., 2021)。簡言之，這種內隱理論的義務觀

有三個層次：第一，改變是可能的；第二，要朝好的、善的方向改變；第三，個人有義務要不斷地修養自己，往好的、善的方向改變。義務觀中「改變的可能性」，呼應Heine等（2001）的研究結果，東亞社會傾向持能力可以改變的增進觀，亦即義務觀中涵蓋了西方內隱理論的「增進觀」。至於義務觀中「個人有義務要不斷地修養自己，往好的、善的方向改變」，則凸顯了儒家文化的特殊性。

在歸因理論方面，儒家社會強調「行有不得，反求諸己」。努力追求縱向目標是個人應盡的角色義務。對學生而言，學業表現欠佳時，應反躬自省是否已經善盡努力用功讀書的角色義務，因此對於能力與努力的性質，與西方看法不同。雖然西方與東亞人都視能力為內在因素，但是在穩定性與可控制性這兩個面向上，東西有別。東亞人對能力的性質常要視情況而定。有些時候，我們會說「沒有數學細胞」，意指能力是內在/穩定/不可控制的因素；有些時候，我們會說「能力是可以培養的」，意指能力是內在/不穩定/可控制的因素。至於努力，因為前述的義務觀，以及「天行健，君子以自強不息」的信念，指出人們應該要效法天地運行的道理，無時無刻都要努力不懈。不論任何狀況，努力都是一定要的（Li, 2012），因此是內在/穩定/可控制的因素，與西方歸屬於內在/不穩定/可控制的因素不同。

（三）自我改進、能力與努力的正向關聯

儒家社會認為人們如果無法達完美的境地，要反求諸己，目的在於幫助孩童在自己的弱項或不足之處，不斷地「自我改善」（self-improvement）（Kitayama et al., 1997），期待自己一天比一天好，以臻完善（self-perfection）。語言文字是文化的載體，文化傳統鑲嵌在常用的成語當中，例如「勤能補拙」、「人一能之，己百之；人十能之，己千之」、「一勤天下無難事」等，在在都鼓勵人們可以藉由努力彌補能力的不足。華人傾向認為能力與努力兩者是正相關（Hong, 2001）。Salili和Hau（1994, p. 233）的實徵研究亦指出，華人學生視能力與努力是正向關聯，愈努力者能力愈高，能力愈高者必定很努力，背後的思維都是努力是獲得成功的好方法。努力使愚者「勤能補拙」，使智者「精益求精，更上層樓」，因此努力是改善能力的方法（means），呈現出努力的「工具性價值」（instrumental value）。這與西方視努力與能力是互斥的，並不相同。

（四）美德導向

從前述《說文解字》對「教育」的解釋，可知華人教育除了學習知識之外，也追求善，與品德密切相關。這呼應Li（2012）在其書中指出，華人對於學習不只是追求外在知識，更強調品德修養，是美德導向（virtue-oriented）。學習過程中包括以下特徵：認真、勤奮、專注、刻苦、恆心。「認真」（earnestness）係指將學習視為正經事，嚴肅地看待學習，例如「業精於勤，荒於嬉」。「勤奮」（diligence）係指努力不懈的學習

過程，會帶來「勤能補拙」、「熟能生巧」、「精益求精」的結果。「專注」(concentration)係指學習過程中要全神貫注，心無旁騖，例如「潛心學習」、「兩耳不聞窗外事，一心只讀聖賢書」。「刻苦」(endurance of hardship)係指學習是作為人應盡的義務，因此需要經歷苦澀的過程，例如「懸梁刺骨」、「不經一番寒徹骨，哪得梅花撲鼻香」。「恆心」(perseverance)係指學習過程中不論發生什麼事，都要移除障礙，例如「精誠所至，金石為開」，「愚公移山」。這些學習過程的特質，都與品德修養有關，故被稱為「學習的美德」(learning virtues)，與西方強調心智導向不同。

(五) 努力的道德性

在華人社會中，學生在任何情況下都應努力用功，而努力用功讀好書通常被認為是盡孝道，善盡對父母的角色義務(Tao & Hong, 2014)，可彰顯個人的德行，進而提升內在的道德修養。儒家社會理想的人就是要成為「品學兼優」的好學生，「品優」先於「學優」。學校教育強調「德智體群美五育均衡發展」，「德育」為五育之首，先於「智育」，足見品德先於知識學問。學生在學習過程中，不論智愚都須努力用功(品優)，才能讀好書(學優)，逐步達到品學兼優的理想境界。盡到角色義務，不會愧對父母的養育之恩。反之，如果未盡到角色義務，不但欠缺道德形象，而且愧對父母。這呼應了荀子勸學篇指出，「學惡乎始？惡乎終？曰：其數則始乎誦經，終乎讀禮；其義則始乎為士，終乎為聖人。真積力久則入。學至乎沒而後止也。故學數有終，若其義則不可須臾舍也。為之人也，舍之禽獸也」。顯示「努力好學」始能彰顯人類獨有的品德仁義，成其為「人」，反之則與「禽獸」無異，顯示努力本身就是目的(ends)，具有「道德性價值」(moral value)。值得注意的是，東西方社會均強調努力的道德性價值，但西方源自於基督新教的工作倫理，與儒家社會的源頭不同。

其次，「學如逆水行舟，不進則退」、「業精於勤，荒於嬉」，都表示聰明者若不孜孜不倦，努力學習，終將導致「小時了了，大未必佳」。倘若不經努力，僅靠天分成功者，是不勞而獲，只是「小聰明」。努力表示當事人認真、負責任、盡本分，因此稱讚一個人「努力」，就是稱讚當事人具有「美德及道德形象」，因此「稱讚努力」與「稱讚人」兩者合而為一。這與西方稱讚一個人很努力，隱含著能力欠佳的反諷不同。此外，鑒於努力的「道德性」及「工具性」價值，家長在養育子女及教師在教育學生的過程中，常是對成功者稱讚努力，表示對當事人的肯定，反而較少稱讚能力好、天份高，以避免學生自恃小聰明而偷懶懈怠，這點也與西方對於成功者稱讚其天分與能力不同。

伍、實徵研究

科學研究問題的來源有三：（1）理論與觀察或實驗結果不一致；（2）理論系統內部發生相互矛盾；（3）兩個不同理論之間的相互衝突（黃光國，2001，p.140）。筆者等的研究問題主要來自於理論與現象不一致，或是跨文化研究顯示東西方不一樣的現象。系列實徵研究結果分以下五部分說明，並將研究結果要放在「修養的角色義務理論」的脈絡下，以彰顯其意義。

一、成敗：目標類型與努力程度對道德形象（moral）與獎懲行為（behavioral）的影響

跨文化實徵研究指出，北美學生傾向將成敗歸因於能力，東亞學生則歸因於努力（Stevenson & Stigler, 1992）。筆者等的研究問題是：為何東亞學生重視努力？在青少年社會化過程中，成人（父母及師長）是否透過獎懲傳遞了努力的文化信念？研究結果發現，比起非縱向目標，在縱向目標成功時，努力者比不努力者更具有認真、負責的正面道德形象，也獲得更多的讚許。失敗時，在縱向目標上不努力者具有最差的道德形象，也受到最多的責備（Fwu et al., 2016）。此外，成人及青少年都認同：在縱向目標上，愈努力者愈具有道德形象，愈有道德形象者愈會受到獎勵（努力者→高道德形象→獲獎勵）。顯見在青少年社會化的過程中，成人傳遞「天道酬勤」及「一分耕耘，一分收穫」的文化信念，青少年接收到這些信念，並內化成自己的信念（Fwu et al., 2014）。

兩篇研究彰顯華人教育觀的特點有三：（1）西方「自我決定論」（self-determination theory）指出，只要是根據自己興趣與內在動機選擇的目標，都一樣重要，沒有主、從之別。不論哪種目標，失敗者較少受到責備，成功者獲得較多的讚許（Hamilton, et al., 1988, 1990; Lourenço, 1994），成功時的獎勵重「結果」。儒家社會目標類型與努力程度會影響獎懲。修養的角色義務理論放在縱向目標時，則能彰顯其意義。在縱向目標上，成人給予學生獎懲時，不只看「成敗」的結果，還考慮「努力」的過程，兼顧「結果」與「過程」，顯見縱向目標的文化特殊性；（2）Dweck（1999, 2000）的增進觀指出，努力可以增加能力，意指努力具有工具性價值。儒家社會勤能補的信念，近似努力的工具性價值，但是在縱向目標上，努力還有很強的「道德性價值」，因此努力成功者因「天道酬勤」而受到讚賞，但不努力成功者因「不勞而獲」而較少受到稱讚；（3）Weiner（1986）歸因理論指出，能力為不可控制的因素，努力為可控的因素，兩者互斥。據此，學者（Dweck, 1999, 2000; Kamins & Dweck, 1999; Mueller & Dweck, 1998）指出，稱讚「聰明」是「對人的稱讚」（person praise），稱讚「努力」是「對過程的稱讚」（process praise），兩者互斥。但儒家社會在縱向目標上，稱讚個人「努力」，也是稱讚「人」，因此對「過程」稱讚與「對人」稱讚兩者合一，並不互斥。

二、失敗：目標類型與努力程度對道德形象（moral）與難過情緒（emotional）的影響

Covington 與其同僚 (Covington, 1984; Covington & Omelich, 1979) 依據「自我價值的成就動機理論」(self-worth theory of achievement motivation) 發現, 美國學生失敗時, 努力可以避免受到教師責罰, 但努力卻失敗, 顯現出自己能力太差, 有損自我價值, 因此努力是把雙面刃。筆者等的研究問題是: 在強調努力的儒家社會, 努力是否也是把雙面刃? 儒家文化系統有無一套心理機制, 可舒緩負面的結果? 研究結果發現, 在縱向目標失敗時, 努力是把雙面刃: 努力失敗會很難過 (feeling bad), 不努力失敗則欠缺道德形象 (being bad), 於是陷入努力也不是, 不努力也不是的兩難困境。此雙面刃在縱向目標明顯大於非縱向目標 (Fwu et al., 2017b)。此外, 在縱向目標上, 儒家文化系統「盡己」的信念, 有助於減少失敗帶來的難過情緒。「行有不得, 反求諸己」後, 如果覺得自己已經竭盡心力對父母盡孝時, 會減少難過的負面情緒 (Fwu et al., 2017a)。

這兩篇研究顯示, 在西方與儒家社會, 努力都是把雙面刃, 但意涵不同, 尤其是修養的角色義務理論放在縱向目標時, 更能彰顯四點意義: (1) 西方的雙面刃源自於能力不足, 有損自我價值, 我國的雙面刃源自於在縱向目標上努力不夠, 顯示出未盡到自己的角色義務, 有損道德形象; (2) 根據基督新教, 努力符合工作倫理, 因此教師不會處罰努力的學生。另一方面學生認為努力失敗者表示能力不足。西方的雙面刃是努力雖可避免教師懲罰, 但卻顯現出自己能力不足, 造成「師生間信念的衝突」(inter-personal conflict)。我國努力者雖具有道德形象, 但會因努力未帶來好結果, 而產生難過情緒, 造成「自我內在的衝突」(intra-personal conflict)。努力失敗會很難過, 不努力失敗則欠缺道德形象, 於是陷入努力也不是, 不努力也不是的兩難困境; (3) 努力是把雙面刃在西方沒有領域的差別, 但在我國則是在縱向目標明顯大於非縱向目標, 顯現縱向目標的文化特殊性; (4) 在縱向目標上, 努力雖是把「劍」(sword) 的雙面刃, 但反求諸己後覺得已「對父母盡己」, 可舒緩負面的難過情緒, 「盡己」發揮了「盾」(shield) 的自我保護作用。

三、縱向目標失敗後持續努力 (behavioral) 的心理歷程與兩難困境

Heine 等 (2001) 及 Zhang 與 Cross (2011) 發現, 西方社會學生成功時會繼續堅持, 但是東亞學生失敗時會持續努力。筆者等的研究問題是: 東亞學生在學業失敗後, 持續努力的心理歷程為何? Schmidt 與 Weiner (1988) 為解釋人類行為的心理機制, 提出 3A model (attribution→affection→action), 即認知影響情意, 進而影響行為。鑒於儒家社會重視「努力」及「行有不得, 反求諸己」的文化信念, 筆者等根據努力的「工具性價值」與「道德性價值」, 發展出「努力進步觀」與「努力義務觀」信念, 並提出 B-3A model (belief→attribution→affection→action), 說明失敗後反求諸己的反思歷程。研究

結果發現，持努力義務觀者，反求諸己後，未盡到角色義務時，會產生愧對父母及愧對自己的負面情緒。為跳脫負面情緒，遂激發持續努力的動力，追求學業成功（Fwu et al., 2018）。另一篇論文發現，學生在學業失敗後，同時產生兩種負面情緒，一種是觸動（activating）的情緒如愧疚感，另一種是非觸動（deactivating）的情緒如絕望感。因為學業是縱向目標，觸動的愧疚感使得學生繼續努力追求成功，以跳脫負面情緒，非觸動的絕望感使得學生喪失鬥志，因此陷在進退維谷的兩難情境（Fwu et al., 2021）。

這兩篇研究顯示華人教育觀的六項特點：（1）廣為學者引用的 Dweck（1999, 2000）「能力本質觀」，在模型中不具任何預測力，但從修養的角色義務理論衍伸的「努力進步觀」與「努力義務觀」卻具預測力，且循不同路徑影響持續努力。這凸顯套用西方理論難以解釋東亞學生的學習，但從儒家文化系統發展出的信念則有助於解釋現象；（2）西方與儒家社會對「反思」（self-reflection）的重點不同，西方強調批判思考、問題解決等「認知」面向（Dewey, 1933; Schön, 1995），儒家社會則強調反求諸己，反省是否對自己盡己與對父母盡孝的「道德」面向；（3）西方學者難以理解愧疚感（indebtedness），建議筆者以罪惡感（guilt）取代，但是兩者截然不同。罪惡感係指「做了不該做的事」，例如偷竊後產生罪惡感，但是愧疚感係指「沒做該做的事」，例如努力用功讀書是子女應盡的角色義務，如果沒有「盡己」，就會產生愧疚感；（4）一般而言，負面情緒常讓人喪失鬥志，而放棄努力。Pekrun 及其同僚（2006; Pekrun & Stephens, 2010）將負面情緒分成觸動及非觸動兩種，但鮮少研究指出兩種負面情緒同時發生。我國學生學業失敗後，同時產生非觸動的負面情緒如絕望感，以及觸動的負面情緒如愧疚感，造成兩難情況；（5）愧疚感分成愧對父母及愧對自己兩種，由於縱向目標源自於父母期待，故先產生愧對父母的感受。個人唯有將愧對父母的感受內化為愧對自己時，才會有繼續努力的動力；（6）儒家文化圈學生心理幸福感（psychological well-being）低於西方國家（Lee, 2009; Liu et al., 2017; Morony et al., 2013; Stankov, 2013），可能的原因不只是失敗帶來的負面情緒如難過，更可能是愧疚感激發努力的推力與絕望感阻礙努力的拉力，兩股力量的拉扯產生進退維谷的兩難困境所致。

四、Covington 成就動機四象限模式在儒家社會的重新檢視

Covington（1991）基於自我價值理論（self-worth theory）提出「成就動機四象限模式」（The quadripolar model of achievement motivation），以「希望成功」（hope for success）與「害怕失敗」（fear of failure）兩個要素，將學生分成四類：高希望成功及高害怕失敗的過勞者（overstrivers）、高希望成功及低害怕失敗的樂天者（optimists）、低希望成功及高害怕失敗的自我保護者（self-protectors）、低希望成功及低害怕失敗的接受失敗者（failure acceptors）。其中過勞者與自我保護者因怕失敗，而產生逃避行為與負面情緒。

筆者等的研究問題是：這樣的分類是否適用於儒家社會？各類學生的行為與情緒有何不同？首先，研究結果發現，Covington 將害怕失敗視為單一因素，但基於修養的角色義務理論，「害怕失敗」有兩個因素，一是自己，如「怕愧對自己」；二是重要他人，如「怕愧對父母」；其次，學生分成六類，前述的四類僅佔 50% 的樣本，新增相對應的儒家型過勞者與儒家型自我保護者兩類佔 50% 的樣本；第三，過勞者與自我保護者兩類確實焦慮感較高，但是有 50% 的儒家型的過勞者及 44% 的儒家型的自我保護者的心理健康頗佳；最後，儒家型過勞者（佔 30%）的比例高於過勞者（佔 23%），且冒險意願略高，儒家型自我保護者（佔 20%）的比例高於自我保護者（佔 13%），且冒險願意明顯較高（Li et al., 2023）。

該篇研究凸顯出儒家社會的三項特點：（1）在西方個人主義的脈絡下，「害怕失敗」被視為單一因素，但從修養的角色義務理論來看，「害怕失敗」則有「自己」與「重要他人」兩個因素，彰顯儒家文化的特殊性；（2）Covington 的四象限模式僅能解釋近半數的學生，卻無法解釋另外一半的學生類別，顯見盲目移植到非西方國家，對瞭解非西方人們的心態常是不相干、不契合的；（3）國際學術評比指出東亞學生比西方學生害怕失敗，尤其是台灣是參與評比的七十多個國家中，最害怕失敗的國家（OECD, 2019），東亞學生也比西方學生的心理健康欠佳（Lee, 2009; Liu et al., 2017; Morony et al., 2013; Stankov, 2013）。但是儒家型過勞者與儒家型自我保護者的心理健康與冒險意願都比過勞者、自我保護者為佳。如果未引用修養的角色義務理論，將儒家型過勞者與儒家型自我保護者從過勞者與自我保護者區分出來，則很難看出東亞學生的全貌。

五、教師回饋對學生學習動機的影響

Rattan 等（2012）的研究指出，美國頂尖大學大一新生在第一次微積分考試表現欠佳時，持「本質觀」的教師常會給予「沒關係，不是每個人對數學都很擅長」能力為本的安慰回饋，沒想到學生解讀為教師認為自己「沒有數學天分」，而放棄在理工領域發展的機會，影響美國國力，令教育界憂心忡忡。筆者等的研究問題是：在儒家社會，學生在數學上表現欠佳時，教師會給甚麼回饋？學生接收到回饋後，對學習動機產生甚麼影響？首先，研究結果發現，持「本質觀」的教師會給西方式「能力為本」（ability-based）的安慰回饋，如「沒關係，不一定每個人都擅長數學」，持「義務觀」的教師會給東方式「義務為本」（duty-based）的安慰回饋，如「沒關係，學習態度比結果重要」或勸告回饋如「一分耕耘，一分收穫，繼續加油」；其次，學生接收到西方安慰回饋時，傾向放棄；接收到東方安慰回饋或勸告回饋時，傾向繼續努力；第三，40% 的教師傾向給東方安慰與勸告回饋，60% 的教師傾向同時給西方安慰、東方安慰與勸告回饋（Fwu et al.,

2022)。顯見如果僅以西方的「本質觀」為思考架構，不足以完全解釋儒家社會教師回饋與學生學習動機的現象。

這篇研究有四項特點：（1）東、西方持本質觀者都給能力為本的教師回饋，沒有文化差異（culture-free），但是持義務觀者會給義務為本的教師回饋，彰顯文化特殊性（culture-bound），呼應修養的角色義務理論；（2）能力為本的回饋，學生解讀為自己能力欠佳，而能力非自己能夠掌控，故對未來不抱希望，放棄數理科；義務為本的回饋，學生解讀為自己尚未盡己，而盡己與否是自己能夠掌控，故對未來的成功仍抱有希望，凸顯教師宜慎重回饋，以避免帶來負面效果；（3）東方安慰與西方安慰都在降低學生的壓力，但是都有利弊。東方安慰雖能激勵學生克服難關，在國際學術評比表現優異，也培養豐沛的理工人才，卻也造成努力仍表現欠佳者的心理健康不如國際同儕；西方安慰雖減少學生投入理工領域，卻能培養非理工各領域的人才；（4）60%教師同時給西方安慰、東方安慰與勸告回饋三種回饋，西方安慰回饋促使學生放棄，東方安慰與東方勸告回饋促使學生繼續堅持，導致學生陷入放棄與繼續堅持的兩難困境。

陸、研究結果的啟示

一、從文化系統解釋研究結果

實徵研究結果要放在理論的脈絡下，才能彰顯其意義。筆者投稿國際期刊時，西方學者很自然地會以西方既有理論架構去理解。但是一旦用西方理論去解釋非西方的現象，就會陷入西方理論的框架，使得研究結果變了調。例如在儒家社會，未盡到角色義務時，會產生「愧疚感」（indebtedness），審查者希望筆者改以他們較易理解的「罪惡感」（guilt）取代。然而一旦改為罪惡感，就要放在基督教文化系統來解釋。天主教和基督教中的告解（confession），係指教徒做了不該做的事後，例如偷竊、殺人，而產生「罪惡感」。教徒為了自己的過錯，單獨向神父表示懺悔之心，而神父便代表天主，赦免其過錯。然而「愧疚感」則不然，係指子女沒盡到角色義務時，例如沒有努力用功好書，就會覺得愧對父母，因此要放在儒家文化系統下，才能凸顯其意義。簡言之，罪惡感係指「做了不該做的事」，而愧疚感是「沒做該做的事」，兩者截然不同。如果非西方學者沒有意識到兩個文化系統的不同，逕行使用西方理論的概念，不但扭曲了研究結果的解釋，也不知不覺地被西方學術殖民，喪失了文化的主體性。同樣道理，近年來國內教育改革常引進西方作法，未考慮我國的文化土壤，也就難怪導致水土不服，而遭詬病。

二、兩難困境帶來心理健康問題

跨文化比較研究指出，儒家文化圈學生的心理幸福感低於西方國家（Lee, 2009; Liu et al., 2017; Morony et al., 2013; Stankov, 2013）。筆者等的研究發現，學生心理健康欠佳可能是源自於在縱向目標失敗情境下，陷入兩難困境所致。不努力失敗者欠缺道德形象，努力失敗者產生難過的情緒，於是陷入努力也不是，不努力也不是的兩難困境。其次，失敗時，一方面產生對未來成功的絕望感，導致想要放棄，另一方面產生愧疚感，想要繼續堅持，也陷入進退維谷的兩難困境。再者，60%教師在學生表現欠佳時，傾向同時給予西方安慰、東方安慰與東方勸告的回饋。西方安慰回饋使得學生傾向放棄努力，東方安慰、東方勸告回饋使得學生傾向繼續努力。學生同時收到西方與東方回饋時，也會面對該放棄，還是該堅持的兩難。或謂學生心理健康欠佳，可能是因失敗後的挫折所致，但是儒家社會學生常面對正向與反方向兩股力量的拉鋸，造成的衝突，讓學生進也不是，退也不是的兩難困境，恐怕是影響心理健康的原因之一。

三、以多元小型金字塔解決單一巨型金字塔的困境

筆者等上述系列研究顯示，縱向目標的文化特殊性使得我國學生努力在「單一」縱向巨型成就金字塔上攀爬，以盡其角色義務，卻陷入學習的兩難困境。既然儒家社會傾向在成就金字塔上攀爬，順勢的解決之道或可建構「多元」小型成就金字塔，讓學生在不同類型的金字塔上攀爬，達到適性揚才的理想。多元金字塔的概念可延伸至大學教師升等與大學類型。若學術論文為教師升等的唯一指標，教師便在「學術論文」的單一巨型金字塔上攀爬，會陷入像學生學習同樣的困境。建立多元升等類型的金字塔，讓教師找出自己最佳定位，選擇最適合的金字塔類型升等。筆者發表「另類學術—教與學的學術」（符碧真，2013）一文，即是教師多元升等的管道之一，與目前教育部推動教師多元升等及教學實踐研究計畫的理念不謀而合。同理，若國際一流研究型大學為大學辦學的唯一目標，則各大學在單一大學排名金字塔上攀爬，亦會陷入同樣困境。建立多元大學類型金字塔，讓各大學找出自己最佳定位，選擇最適合的金字塔往上攀爬。如此一來，學生、教師可在不同類型的金字塔上發揮長才，大學亦可在不同類型的金字塔上培養各種人才。

柒、對研究者的建議

回首來時路，筆者不揣淺陋，對研究者提出以下建議，或可少走一些冤枉路。

一、從研究缺口找到問題意識

要縮短前述引用西方理論到我國教學實務現場的第一道鴻溝，學者扮演重要角色。現今各大學對教師評估及升等的要求，希冀將研究結果向 SCI、SSCI 國際期刊投稿，以接受國際學術界的檢驗，深陷「叫」的困境。國際學術期刊審查，首重原創性(originality)與獨特性(uniqueness)。儒家文化圈國家學生每每在 TIMSS 及 PISA 等國際學術評比表現優異，引發學術界的好奇，但因西方學者難以掌握儒家文化的精髓，以致隔靴搔癢，甚或有不當的解讀。許多跨文化實徵研究結果顯示，東亞學生的學習與表現與西方既有理論不完全符合。亞洲儒家文化圈國家的學者並未從這些實徵資料的累積中，發展出有關的理論模式，將實徵研究結果放在理論脈絡中加以解釋，彰顯這些研究結果的意義與價值，殊為可惜。這個研究缺口(research gap)為國內學者從事原創性與獨特性的研究開啟了一扇窗，有助於國際期刊的學術發表，也能在國際上爭取到話語權，成為西方社會了解華人世界理論與實務的最佳窗口。

然要從何切入，找出問題意識呢？或可從兩個角度切入：第一，藉由跨文化的研究結果，找出東西方的差異，進而探討為何(why)東亞國家學生會有不同結果，以及心理機制為何(how)，以呈現文化的主體性。例如跨文化研究發現，在內隱理論上，西方學生本質觀，但是東亞學生傾向增進觀；在歸因理論上，西方傾向採取能力模式，但是東亞社會傾向採取努力模式。研究者或可進一步從儒家文化系統的「修養角色義務理論」，指出東亞學生的信念不只是增進觀，而是義務觀；失敗不只是歸因於努力，而是盡己與否；第二，前述指出，研究問題的來源有三，筆者等的系列研究多源自於理論與現象的不一致(異例)，大都採取以下三段論述，找到研究問題。大前提係指眾所周知的理論或研究結果；小前提係指與大前提不一致的現象；研究問題可能包括：有哪些不一樣的結果(what)，為何會有不一致的現象(why)，以及是透過甚麼樣的心理機制運作的(how)。例如西方既有研究顯示，成功者會受到稱讚，屬於結果論(大前提)，但在我國非結果論(小前提)。研究問題是甚麼樣的情況會稱讚成功者(what)，從修養的角色義務理論推論為什麼會稱讚(why)，以及心理機制為何(how)。針對研究問題，結果發現，努力成功者受到稱讚，不努力成功者則否(what)，主要是因盡到角色義務的道德形象為關鍵(why)。其中的心理機制是：學生盡到努力用功讀書的角色義務，具有道德形象，天道酬勤，會受到稱讚，但是未盡到角色義務成功者，欠缺道德形象，被視為小聰明，就不會受到稱讚，因此稱讚是過程與結果兼顧(how)。

二、以文化系統進行發明的研究

泛文化向度的跨文化比較研究，常以西方理論為基礎，對比出西方與東亞學生的差異。而理論係指人類對自然、社會現象，按照已有的實證知識、經驗、事實、法則、認知以及經過驗證的假說，經由外推化(generalize)與演繹推理等等的方法，進行合乎邏

輯的推論性總結。在西方理論的架構下，可以以合乎邏輯的方式解釋西方學生學習的現象，東亞學生則被放置在西方理論框架下的相對位置，常與當地不契合、不相干。這樣的研究結果是「只知其然，卻不知其所以然」，難以彰顯學者的主體性。

鑑於此，建議以儒家社會的「硬核」及文化系統推論研究假設，驗證假設，進行「發明」的系列研究，達到「知其然，且知其所以然」，以彰顯學者的主體性。例如基於修養的角色義務理論的「硬核」，盡到角色義務者，道德修養愈高，獲得的道德評價高，不會產生愧疚感。據此推論在社會期許的縱向目標上，努力者對道德面（moral）、情緒面（emotional）、行為面（behavioral）上的影響，從事系列研究。但此「硬核」並不適用於所有類型的成就目標，加上輔助假設後，只有在社會期許的縱向目標下成立，在非縱向目標不成立，不去挑戰「硬核」。例如學業表現失敗時，不努力欠缺道德形象（道德面），努力失敗則會難過（情緒面），因此陷入兩難困境。但此兩難困境在非縱向目標則較不明顯。同樣道理，相較於繪畫的術科，學業成功時，努力比不努力者更具有道德形象（道德面），且獲得較多的稱讚（行為面）；學業失敗時，不努力比努力失敗者更不具備道德形象（道德面），且受到較多的責備（行為面）。學業失敗時，一方面未盡到角色義務，產生愧疚感（情緒面），為跳脫此負面情緒，會繼續努力（行為面），另一方面，產生絕望感（情緒面），而放棄努力（行為面），進而陷入繼續堅持或放棄的兩難。這些結果都顯示，如果未區分縱向目標與非縱向目標，則修養的角色義務理論就會崩塌瓦解。

三、區辨普同性與文化特殊性的現象

牛頓曾言「如果我能看得更遠，那是因為站在巨人的肩膀上」。所有的成就都是累積、循序漸進而來的，如果不奠基在前人的成就之上，就無法期待進步。非西方的學者從事研究時，不宜盲目地全盤西化，亦不宜全盤拒絕。相反地，學者宜站在巨人的肩膀上，探討在甚麼情況下是普同性的（culture-free）現象，在甚麼情況下具有文化特殊性（culture-bound），將更具意義與價值。鑒於西方人與非西方人因為都是「人」，生理結構相似，因此有普同性的現象；因各地文化不同，因此具有文化特殊性的現象。倘研究結果與西方既有理論相同時，顯示出普同性；倘研究結果不同，凸顯出特殊性。例如筆者等的研究指出，持 Dweck 內隱理論的本質觀者，會給表現欠佳的學生西方回饋，此結果與西方研究結果相同，具有普同性；持修養角色義務理論的義務觀者，會給學生東方安慰與勸告的回饋，具有文化特殊性。

拉卡托斯的精緻否認論指出，唯有當科學家提出的新理論能解釋舊理論先前的成功，或者新理論的內容包含了舊理論中不可反駁的部分時，舊理論才能受到否認（黃光國，2001，p.196）。倘若吾人能區辨出在甚麼情況下是普同性的（culture-free）現象，

在甚麼情況下有文化特殊性（culture-bound），產生的新理論不但能解釋舊理論先前的成功，也增加了新知識，代表著科學的進化。英國歷史學家湯恩比（Arnold J. Toynbee）預言，「十九世紀是英國人的世紀，二十世紀是美國人的世紀，二十一世紀將是華人的世紀」。在華人世界中，我國是同時受過西方教育洗禮，以及保有儒家文化底蘊最為完整的國家，具有中西匯通的優勢，提供國內學者建構新理論的養分。因此，我國學者最有機會建構出理論模型，既能解釋西方社會既有的現象，也能解釋儒家社會文化特殊性的現象（符碧真、黃源河，2016），引領科學的進化。

捌、結語

本文呈現筆者進行華人教育觀研究時，從哲學反思、理論建構、實徵研究的心路歷程。在學術上，期待研究結果能與西方理論對話，找出哪些現象不受文化影響，展現出普世性，哪些現象是受儒家文化影響，展現出文化特殊性，以增加此領域的新知識。在實務上，以證據為本（evidence-based）的研究結果提供教與學的指引，以減少「理論無用論」的抱怨，冀望對社會有所貢獻，筆者戲稱另類 SCI（social contribution index 社會貢獻指標）。本文期能拋磚引玉，引發更多學者投入華人教育觀這個尚待開發的園地，為理論與實務斷裂長久的沉痾，找出原因與解決問題的可行之道。

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Confucian Ethics and Chinese Educational Perspectives: Philosophical Reflection, Theoretical Construction, and Empirical Research

Bih-Jen Fwu

Abstract

During my career of preparing teachers, pre-service teachers often complain about the theory-practice divide. One of the main reasons is the introduction of Western theories to Confucian societies without considering cultural differences. East Asian students outperform their international counterparts on many international comparisons, such as TIMSS and PISA, but empirical studies have revealed that existing Western theories cannot fully explain these phenomena. Therefore, I have devoted myself to researching the Chinese view on education. This article describes my journey, including philosophical reflection, theoretical construction, and empirical research. Regarding philosophical reflection, I realize the fundamental differences between discovery derived from the only truth and invention originated from approximate truth, thus replacing discovery with invention research; understand the relationship between the hardcore and the protective belt, thus adding auxiliary hypotheses to protect the hardcore; distinguish the pan-cultural approach from the cultural system approach, therefore switching from know-what to know-why and know-how research. Based on Confucian ethics, our research group constructed the “role obligation theory of self-cultivation” (ROT), indicating that individuals should fulfill their role obligations to meet the expectations of significant others in the dyad of five cardinal interpersonal relationships. Duty fulfillment is an essential criterion for judging an individual’s moral cultivation. Fulfilling obligation, on the one hand, is an indication of upgrading one’s moral cultivation; on the other hand, it connects to social expectations; thus, those who fulfill their obligations are viewed as morally upright and ethically correct. As to empirical research, our research group found that in Confucian-heritage cultures such as Taiwan, (1) making an effort in academic domains has strong moral values, showing that heaven rewards hardworking students; (2) in the face of academic failure, students are trapped in a dilemma between feeling bad and being bad; (3) when encountering academic failure, students are in a predicament of feeling hopeless and indebted, putting them in an

awkward position of whether to persist or not; (4) building a “belief→attribution→affection→action” (B3A) model to explain the psychological mechanism of how students reflect on their academic failure; (5) while the western quadripolar model can only explain 50 % of the sample, the addition of ROT can explain another 50%; (6) a majority of teachers tend to provide failing students with ability-based and duty-based feedback simultaneously, thus leading students at a loss. These results imply that empirical findings would be better understood from the cultural system; students’ poor psychological well-being may relate to many dilemmas when facing academic failure; building multiple small achievement pyramids rather than one giant achievement pyramid may mitigate the predicaments. Finally, three suggestions are for scholars, including identifying research questions from research gaps between existing Western theories and local phenomena, conducting invention research from the perspective of cultural systems, and further distinguishing between culture-free and culture-specific phenomena in advancing psychological knowledge. Hopefully, more scholars will be involved in this field yet to be developed and find the solutions to the theory-practice divide.

Keywords: philosophical reflection, theoretical construction, Chinese educational perspectives, empirical research, Confucian ethics

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I. Introduction

The author works at a teacher education center. Throughout the process of training future educators, pre-service teachers frequently express concerns regarding the substantial gap between theory and practice, and some even propose the notion that “theory is useless,” which has been quite troubling for the author. Here are two examples to illustrate this issue.

First, when pre-service teachers undertake teaching practicums in secondary schools, they occasionally offer students candy as a reinforcer for exhibiting behaviors that align with the teacher's expectations. However, students often respond by saying, “That’s so childish!” Despite the pre-service teachers applying the reinforcement principles they learned in class, the outcomes did not align with their expectations (Fu & Huang, 2016), leaving them feeling quite disappointed.

Another example involves teachers' responses to students' poor performance in mathematics. American teachers tend to comfort students by saying, “It’s okay, not everyone is good at math” (Rattan et al., 2012), whereas Taiwanese teachers often say, “It’s okay, just do your best and keep working hard” (Fwu et al., 2022).

These two examples highlight the discrepancies between what is taught in class and what is encountered in real teaching situations. This observation aligns with the findings of the Teacher Education and Development Study in Mathematics, which compared teacher preparation across various countries. Among the fifteen participating nations, Taiwanese primary and secondary school teachers ranked third and second to last, respectively, in terms of the perceived coherence between their university education and the realities of teaching in schools (Hsieh et al., 2010). This serves as compelling evidence of the issue at hand.

The author seeks to explore the aforementioned results from two perspectives. First, the “epistemology of technical rationality” (Schön, 1983; 1995) has long dominated the model of teacher education, resulting in a gap between theory and practice. In this model, scholars initially develop educational theories through rigorous scientific methods and procedures. These theories are then categorized into various disciplines by universities, such as the philosophy of education, educational psychology, and instructional theory, and are subsequently delivered to pre-service teachers. Pre-service teachers are then expected to apply these theories in real teaching contexts.

In reality, theories are established by controlling for various factors to create clear relationships between variables. However, real-world situations are far from ideal, as numerous

variables are at play, resulting in relationships that often do not align with expectations. This discrepancy contributes to the gap between theory and practice (Fu & Huang, 2016).

In the first example above, for students from high socio-economic backgrounds, candy may not be perceived as special, and praise might serve as a more appropriate reinforcer than candy. Therefore, the principle of reinforcement remains applicable; it is just that the pre-service teacher failed to recognize the particularity of the situational context, which resulted in a disconnect between theory and practice.

Secondly, Henrich et al. (2010) pointed out that 96% of the samples in psychological studies published in leading international journals originate from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies. However, populations represented by these WEIRD samples constitute only 12% of the global population. Raffaelli et al. (2013) further observed that the vast majority of adolescents live in the “majority world” of developing countries, while most adolescent theories originate from the “minority world” of Western industrialized nations. These scholars have raised concerns about whether theories constructed in Western contexts can adequately explain phenomena in non-Western countries.

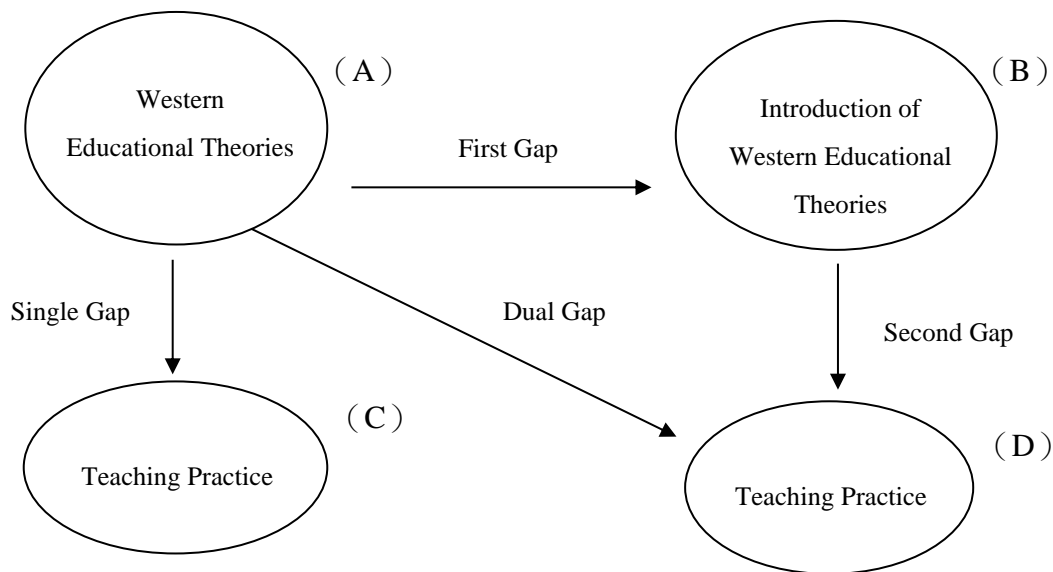
In the second example above, there is a significant difference in how American and Taiwanese teachers comfort students with poor academic performance. This clearly demonstrates that applying research findings developed from “WEIRD” samples in Western industrialized countries to our country can result in a gap created by cultural differences between the East and the West.

In summary, when pre-service teachers in Taiwan enter the teaching profession, they encounter a dual gap (as illustrated in Figure 1 from points A to D). The first gap arises from the cultural differences between Eastern and Western contexts; Western educational theories may not be entirely applicable to our local environment. Consequently, when the domestic academic community directly applies these Western theories to Taiwan’s cultural context, it creates the first gap (from A to B in Figure 1). Additionally, the “epistemology of technical rationality” model of teacher education contributes to a second gap between theory and practice (from B to D in Figure 1). This dual gap leads pre-service teachers to perceive the educational theories they learned at university as ineffective.

This article aims to explore the first gap in research. The research paradigms developed from Western “WEIRD samples,” when blindly transplanted to non-Western countries, are often irrelevant and incompatible for understanding the mindset of non-Western people (Hwang, 2009a). The philosopher of science Karl Popper (1972) noted that when theories and observed phenomena are inconsistent, these discrepancies are referred to as anomalies. If a theory

Figure 1

The Dual Gap in the Introduction of Western Theories into Taiwan's Educational Practices



Note. Adapted from “Field-based experience: A solution for the theory-practice divide in teacher education?” by B.-J. Fwu, & Y.-R. Hwang, 2016, *Journal of Research in Education Sciences*, 61(2), P. 66.

encounters a significant number of anomalies, scientists should propose tentative solutions to reconcile the inconsistencies between theory and observation.

This article aims to explore the first gap in research. The research paradigms developed from Western “WEIRD samples,” when blindly transplanted to non-Western countries, are often irrelevant and incompatible for understanding the mindset of non-Western people (Hwang, 2009a). The philosopher of science Karl Popper (1972) noted that when theories and observed phenomena are inconsistent, these discrepancies are referred to as anomalies. If a theory encounters a significant number of anomalies, scientists should propose tentative solutions to reconcile the inconsistencies between theory and observation.

Countries within Confucian-heritage cultures—such as Taiwan, Hong Kong, Japan, South Korea, Singapore, and Mainland China—consistently perform well in international academic assessments like TIMSS and PISA. However, Hau and Ho (2010), in the *Oxford Handbook of Chinese Psychology*, reviewed students’ learning motivation and achievement in Chinese societies and noted that many empirical research findings indicate that Western theories cannot fully explain the performance and learning behaviors of students in Asian countries.

In light of this, since 2004, I have participated in the “Ministry of Education’s Pursuit of Excellence Research Project—Research on Indigenous Chinese Psychology.” Through this experience, I have discovered that many Western theories fail to adequately explain phenomena within Chinese societies. Consequently, subsequent research projects funded by the National Science and Technology Council have focused on examining Chinese perspectives on education. The aim is to develop theories rooted in the Confucian cultural context that can elucidate Taiwan’s educational phenomena and address our specific educational challenges, thereby bridging the gap between theory and practice.

I have engaged in a process of philosophical reflection, theoretical construction, and empirical research, which will be elaborated upon in detail below.

II. Inspiration from the Philosophy of Science

I have attended Professor Kwang-Kuo Hwang’s courses on the philosophy of science multiple times. Each experience has provided me with unique insights and inspirations that have significantly enriched my research. Below are some of the most notable examples.

1. Absolute Truth vs. Approximate Truth

Professor Huang was the educator who introduced me to the study of Chinese views on education. I still remember the first time I presented my research findings to him. He described my approach as “naïve positivism.” At that moment, I was uncertain whether this was intended as a compliment or a critique. Through attending classes and engaging in discussions, I gradually came to understand the difference between “discovery” and “invention.” Research focused on “discovery” is rooted in the scientific philosophy of positivism, which believes that the laws governing the natural world, created by a higher power, represent absolute truth. The scholar’s task is to strive to uncover this “absolute truth”, using a bottom-up approach. It is like filling a bucket: by collecting sufficient data, one assumes that theory will naturally emerge.

This research approach allows the evidence to speak for itself, which may lead scholars to engage less critically with the material, ultimately failing to showcase their creativity and subjectivity. In contrast, research focused on “invention” is rooted in the scientific philosophy of post-positivism, which holds that the nature of reality is uncertain and believes in “approximate truth” rather than “absolute truth.” Every scholar has the opportunity to exercise creativity and propose their own version of approximate truth, competing to determine whose

explanation is more compelling. Scientific research resembles a searchlight: scholars take the initiative and employ a top-down approach, consistently raising questions, making rational conjectures, and utilizing theories to deduce hypotheses, followed by collecting data to test these hypotheses. In this manner, the illumination of theory can shine into the future, emphasizing the scholar's subjectivity (Popper, 1972).

Table 1

The Difference Between Discovery and Invention

	Discovery	Invention
Philosophy of Science	Positivism	Post Positivism
Views on Truth	The laws by which God created and governs nature are the only truth.	The ontology is uncertain; there is only approximate truth, not absolute truth.
Creativity Requirements	Researchers strive to discover the one and only truth, which does not vary from person to person and cannot reflect individual creativity.	Every researcher can exercise creativity and propose an approximate truth. They compete with each other to determine whose explanation possesses greater explanatory power.
Research Methods	The bottom-up inductive method is like a bucket: by gathering sufficient data, the theory will naturally emerge. The evidence is self-evident, and scholars do not need to use their intellect.	The top-down deductive method is like a spotlight: hypotheses are formulated based on theory, and data is subsequently collected. Scholars articulate their findings; evidence does not speak for itself.
Interpretation of Research Results	To speculate about the underlying reasons behind the research results.	Research results are utilized to validate the accuracy of the inference.
Researcher Subjectivity	No subjectivity.	Hypotheses are inferred based on theory, challenging established theories and demonstrating subjectivity.

Note. Adapted from K. K. Hwang, 2001, *The logic of social science*, p. 9-11. Psychological Publishing Co. (in Chinese); “Invent or discover, but first ask Newton,” by K.-K. Hwang, 2009b, January 19, *United daily News*. <https://blog.udn.com/cc10/8599467> (in Chinese)

(1) Research on Discovery

My early research, conducted in collaboration with my colleagues, primarily focused on teacher education and fell under the category of “research of discovery.” Literature shows that English-speaking countries, such as the United States, the United Kingdom, and Australia, have long faced issues such as the low social status of teachers, challenges in recruiting high-quality educators, and a high attrition rate among new teachers within the first five years. In contrast, teachers in Taiwan enjoy a relatively high social status (Fwu & Wang, 2002a), making it feasible to recruit high-quality teacher candidates (Fwu & Wang, 2002b; Wang & Fwu, 2007), and the teacher attrition rate is low (Wang & Fwu, 2014).

I adopted bottom-up inductive methods, including questionnaire surveys and in-depth interviews, to explore teacher candidates' motivations for pursuing a career in education and to assess their willingness to consider changing careers after entering the profession. I believed that by gathering sufficient data, the evidence would reveal the truth on its own. While I could only speculate about the potential underlying reasons from perspectives such as historical culture and government policies, I lacked mechanisms for verification. In fact, this type of research can be conducted by anyone, and the results are likely to be similar, which makes it challenging to emphasize the researcher's creativity and subjectivity.

(2) Research on Inventions

After understanding the distinction between “discovery” and “invention,” I shifted my focus toward researching invention. Noting that East Asian students consistently excel in international academic assessments such as TIMSS and PISA, yet recognizing that Western theories cannot fully explain these outcomes, I collaborated with Professor Hsiou-Huai Wang from the field of education, as well as Dr. Chih-Fen Wei and Professor Shun-Wen Chen from psychology, to form a research team dedicated to exploring Chinese perspectives on education. Chen et al. (2009), drawing on the characteristics of Chinese culture, proposed a framework of Chinese achievement goals, pointing out that when Chinese individuals construct achievement goals, they consider not only personal interests emphasized by Western theories (personal goals) but also the expectations of significant others highlighted in Confucian culture (vertical goals).

Such a theoretical framework not only challenges existing Western theories but also showcases the researcher's creativity and subjectivity. Our research group adopted a top-down deductive approach: based on the aforementioned theoretical framework, we formulated hypotheses and subsequently collected data to test their validity. In this type of research, it is the scholars who take the initiative to voice their perspectives. However, explaining the learning experiences of students in Confucian societies to the international academic community is by no means an easy task. After a decade of effort, a series of studies on Chinese views on education have gradually been published since 2014. It is important to note that the research findings presented by our group represent only an approximate truth. We encourage other scholars to propose alternative theoretical frameworks and engage in a discourse to determine which approximate truth offers greater explanatory power.

2. The Hard Core and Protective Belt of a Scientific Research Program

Lakatos's concept of the "scientific research program" has been profoundly inspiring to me. This program is based on a "hard core," which serves as its fundamental theory. The hard core is unverifiable and consists of a set of metaphysical or presupposed ideas that are both heuristic and irrefutable; it cannot be altered or disproven. The "protective belt" refers to the auxiliary hypotheses proposed by scholars to safeguard the hard core. If the hard core is refuted, the entire scientific research program collapses. To protect the hard core, researchers add antecedent conditions to the auxiliary hypotheses, ensuring that challenges can only be directed at the protective belt (Hwang, 2001, p. 189). To illustrate the concept of the hard core, let us consider moral views as an example. Dworkin (1978) categorizes moral beliefs into two types: rights-based and duty-based.

"Rights-based" emphasizes that rights are the fundamental basis for the moral correctness of human actions, while "duty-based" emphasizes that duties serve as the fundamental reason for the moral actions. Dworkin further points out that all cultures include personal rights, personal duties, and social goals; however, the priority assigned to each of these three elements varies across different cultures. Consequently, the "hard core" of each culture's scientific research program differs, as elaborated below. The hard core in Western societies contrasts with that in Confucian-heritage cultures. If scholars attempt to directly transplant Western theories into our society without considering the differences in the "hard core" between the two, their understanding of the mindsets within our society may often be irrelevant or incompatible. Such an approach risks devolving into a form of academic self-colonization.

(1) The Hard Core of Western Individualism

The hard core of Western societies include the belief that the source of life is God and the primacy of individual rights. The Western Christian religious tradition presupposes that the world was created by God, and that God created human beings in His own image. Consequently, the source of individual life is God. Since all people are created in the image of God, all individuals are considered equal, and everyone is entitled to equal opportunities—what Dumont (1985) refers to as the “ideology of the individual as equal.” Based on this presupposition, the “self” possesses its own boundaries and should be protected, which is a defining characteristic of Western individualism. The “individual” is regarded as the autonomous unit of action within a social group, and society is perceived as a collection of individuals. “Individual rights” take precedence over individual duties and social objectives (Bedford & Hwang, 2003).

For example, “life, liberty, and property” are considered inalienable natural rights of human beings; they remain constant regardless of any individual or circumstance and possess both universality and permanence. Furthermore, based on the principle of “ethics of autonomy,” individuals have the right to make their own decisions in accordance with their will, values, and desires, rather than being subjected to external forces or the control of others. Individuals enjoy the greatest freedom in selecting their goals and the means to achieve them, which is regarded as the most effective way to develop personal interests. Freedom is a crucial component of individualistic societies, as it allows individuals to develop their talents and potential freely and in their own unique ways (Bedford & Hwang, 2003). In summary, the characteristics of these rights are: (1) they are discussed at the individual level; (2) rights are equal for everyone, and their legitimacy is universal, meaning they do not change under any circumstances.

(2) The Hard Core of Relationalism in Confucian Societies

The hard core of Confucian societies emphasize that the source of life is one’s parents and the individual’s role-based duties. The moral framework of these societies is centered on “role ethics,” which can be traced back to Confucian cultural traditions. As stated in the Classic of Filial Piety (Xiaojing): “One’s body, hair, and skin are received from one’s parents; one must not dare to harm them—this is the beginning of filial piety.” This indicates that the source of an individual’s life originates is their parents, and that there is a hierarchical relationship between parents and children.

Furthermore, Confucian societies emphasize relationalism (Hwang, 2009a), where “individual duties” and “social goals” take precedence over “individual rights.” Within the framework of relationalism, individuals are situated in networks of interpersonal relationships from birth and develop close ties with “significant others” in various “dyad relationships” within these networks (Hwang, 2000, 2001).

At the same time, within each specific dyadic relationship, individuals are expected to conform to the role expectations of their significant others, continuously engaging in self-cultivation and fulfilling their role-based responsibilities. In traditional Confucianism, individuals are ranked according to their moral achievements; they are encouraged to constantly improve themselves and cultivate their character, striving toward the ideal that “scholars aspire to become virtuous, and the virtuous aspire to become sages,” which is similar to what Dumont (1985) refers to as the “hierarchical view of persons.” For example, in the dyadic relationship between father and son, the father's role duty is to be loving, while the son's role duty is to be filial (“the father should be kind, and the son should be filial”). In the relationship between ruler and subject, the ruler's role duty is to demonstrate benevolence, while the subject's role duty is to exhibit loyalty (“the ruler should be benevolent, and the subject should be loyal”). It is clear that the roles of father, son, ruler, and subject each carry distinct responsibilities, and all individuals are required to engage in continuous self-cultivation to fulfill their respective obligations.

The characteristics of these duties are as follows: (1) they are discussed at the level of interpersonal relationships rather than at the individual level; (2) role-based duties differ according to specific relational partners and hierarchical status, and therefore lack universality—instead, they are particular in nature (particularity).

3. Pan-Cultural Dimensions vs. Culture System Research

Hwang (2014) proposed two research orientations: “pan-cultural dimensions” and the “cultural system” perspective. For non-Western scholars, understanding the distinctions between these two research approaches is particularly important. The pan-cultural dimensions approach takes mainstream Western psychological theories and subsequently develops instruments to measure psychological constructs that are equivalent across various cultural groups. For instance, Hofstede's (2011) cultural dimensions theory serves as a framework for cross-cultural comparison and includes six dimensions.

The most widely cited dimension in cultural studies is individualism versus collectivism. English-speaking countries, such as the United States, the United Kingdom, and Australia, tend to score high on this dimension, indicating a preference for individualistic values. In contrast, countries like Hong Kong, Serbia, Malaysia, and Portugal score low and are classified as collectivist societies. While this approach can yield a large number of fragmented empirical research findings, it often obscures the unique characteristics of non-Western cultures and can lead to a loss of their cultural identity (Hwang, 2014). In contrast, the “cultural system” research orientation refers to the original set of perspectives and ideas proposed by the founder of a particular system. For instance, to fully understand the Confucian cultural system, one must return to how Confucius himself articulated these ideas. Subsequent interpretations of this cultural system are shaped by specific socio-cultural conditions and represent reinterpretations of the original cultural system.

(1) The Pan-Cultural Research Orientation

I attended the 2023 Asian Association of Social Psychology conference held in Hong Kong. One of the keynote speeches, titled “Cultural Defaults in the Time of the Coronavirus: Lessons for the Future,” was delivered by Hazel Markus and Jeanne Tsai from Stanford University, along with Yukiko Uchida from Kyoto University. They used the dichotomy of the “independent self” versus the “interdependent self” to investigate differences in mask-wearing behavior during the COVID-19 pandemic. Their findings indicated that Americans, who typically embody an independent self, were less willing to wear masks, whereas Asians, who generally exhibit an interdependent self, were more willing to do so. This research demonstrates that participants from WEIRD (Western, Educated, Industrialized, Rich, and Democratic) samples are characterized by the “independent self,” which has clear and distinct features. In contrast, individuals who differ from WEIRD samples are categorized as having an “interdependent self,” but their characteristics remain relatively vague. Unfortunately, this pan-cultural research orientation only describes the difference in mask-wearing willingness between the two groups (what), but does not further explain why Asians with an interdependent self are more willing to wear masks (why). In other words, this research orientation decontextualizes the findings, providing insight into “what” Asians do (i.e., their willingness to wear masks) but failing to explain “why” they do so.

(2) The Cultural System Research Orientation

At the aforementioned conference, I presented a paper examining the relationship between role obligations and rights through the perspective of Confucian Ethics. The research findings indicated that parents who have fulfilled their obligations of caring for and raising their children possess a stronger claim to the right to request that their children choose the academic discipline preferred by the parents, compared to those who have not fulfilled these obligations. This underscores the principle that only individuals who have met their role obligations are entitled to corresponding rights (Fwu et al., 2023). During the conference, Western scholars remarked that this phenomenon suggests that adolescents in Chinese societies are less independent and autonomous than their Western counterparts, as they are expected to adhere to their parents' decisions. Consequently, they are characterized less by an "independent self" and more by an "interdependent self." In fact, the epistemologies (or cognitive frameworks) adopted by WEIRD (Western, Educated, Industrialized, Rich, and Democratic) and Non-WEIRD societies are fundamentally different.

Therefore, when WEIRD societies interpret Non-WEIRD phenomena through their own epistemological frameworks, they may perceive these phenomena as strange. Similarly, Non-WEIRD societies may find WEIRD phenomena puzzling when viewed through their own knowledge structures. Hwang (2014) proposed a cultural system research orientation, suggesting that researchers should further explore why certain phenomena occur from the perspective of cultural systems. In this context, Non-WEIRD researchers might begin by referencing previous cross-cultural comparative findings, identifying phenomena that differ from those observed in WEIRD samples. They can then use a cultural system perspective—such as Confucian Ethics—to explain why Confucian societies exhibit phenomena distinct from those of the West. In this way, research findings enable us not only to know "what" happens, but also to understand "why" it happens.

III. The Construction of Theory

Empirical research findings must be situated within a theoretical context to highlight their significance. I adopt a cultural system perspective and construct the "role obligation theory of self-cultivation" based on the Confucian cultural framework to explain a series of subsequent empirical studies. The following section will first introduce the Confucian cultural system, then elaborate on the Role Obligation Theory of Self-Cultivation, thereby laying the foundation for the next section on Chinese views on education.

1. Confucian Cultural System

In society, individuals encounter five fundamental types of interpersonal relationships: husband and wife, father and son, brothers, ruler and subject, and friends. Collectively, these are referred to as the "Five Cardinal Relationships" (Wu Lun). Among these, father and son, husband and wife, and brothers represent familial relationships, while ruler and subject, as well as friendships, exist outside the family unit. Other interpersonal relationships are often categorized as "quasi-family" relationships. For instance, in ancient times, common people respectfully referred to local officials as "parental officials," a tradition that continues today when addressing county or city leaders. Within a family, there are parents and siblings, and to match these titles, terms have been extended from "master" to derive "master's wife," "senior brother," "junior brother," "senior sister," and "junior sister"; friends' parents are called "uncle" and "aunt"; close friends are referred to as "brothers" or "sisters"; among classmates, senior students are called "senior schoolmates," and junior students are called "junior schoolmates."

The "commoner ethics" (shuren lunli) of pre-Qin Confucianism emphasizes "relative ethics," which are interpersonal ethical norms that individuals are expected to follow. According to their roles and statuses, individuals naturally and sincerely practice the norms of "li" (ritual propriety) and fulfill their duties (Yang Zuhan, 2019). This concept is reflected in the *Analects*, specifically in the "Yan Yuan" chapter: "Let the ruler be a ruler, the minister be a minister, the father be a father, and the son be a son." Mencius further extended the human relationships between ruler and subject, as well as father and son. In "Mencius, Teng Wen Gong I," he proposed the paired Five Cardinal Relationships: "Affection between father and son, righteousness between ruler and subject, distinction between husband and wife, order between elder and younger brothers, and trust between friends." These Five Relationships clearly specify the behavioral norms for each pair: mutual affection between father and son, propriety and righteousness between ruler and subject, appropriate distinction between husband and wife, order of seniority among brothers, and sincerity and trust between friends, all aiming for harmonious interactions.

In "The Book of Rites, Chapter on the Evolution of Rites," it is stated: "A father should be kind, a son filial, an elder brother gentle, a younger brother respectful, a husband righteous, a wife obedient, an elder benevolent, and a younger compliant, a ruler benevolent and a minister loyal—these ten qualities are referred to as human righteousness." "Relative ethics" are based on "ren" (benevolence) and "li" (ritual propriety). Individuals in higher status roles, such as

fathers, elder brothers, husbands, elders, and rulers, are expected to cultivate themselves and first fulfill their responsibilities of kindness, gentleness, righteousness, benevolence, and humanity. In turn, those in lower status roles, such as sons, younger brothers, wives, the young, and ministers, naturally strive to cultivate themselves and fulfill their obligations of filial piety, respect, obedience, compliance, and loyalty (Huang Guangguo, 2009a). If one fails to fulfill these role obligations, one may feel shame in the presence of significant others.

Because the expectations of significant others are constantly rising and never-ending, individuals should continuously cultivate themselves and fulfill their role obligations in the pursuit of self-perfection (Chan, 2014). This concept resonates with **The Great Learning** in the **Book of Rites**, which states: “As the inscription on the washbasin of Tang says: If you can renew yourself for one day, do so every day, and let there be daily renewal.” This means that one should consistently eliminate negativity and strive for goodness in their behavior, make continuous progress in moral cultivation, and seek improvement—transforming into a new self each day.

It also resonates with passages from the Book of Rites, specifically the Doctrine of the Mean: “Archery is like the way of the gentleman. When he misses the mark, he turns and seeks the cause within himself.” Similarly, Mencius, in Li Lou I, states: “If your actions do not achieve what you desire, always look for the cause within yourself. When your conduct is correct, Heaven will respond accordingly.” Furthermore, in Mencius, Gong Sun Chou I, it is said: “An archer first rectifies himself before shooting. If he fails to hit the target, he does not resent those who surpass him; instead, he seeks the cause within himself.” These passages convey the idea that when individuals encounter shortcomings or failures, they should refrain from blaming or resenting others and instead engage in self-reflection. By upholding the spirit of “As Heaven maintains vigor through movement, a gentleman should constantly strive for self-improvement,” one should persist in self-cultivation and self-improvement to attain ever-greater perfection.

2. The Theory of Role Obligations in Self-Cultivation

Based on the aforementioned Confucian cultural system, we have constructed the “role obligation theory of self-cultivation” (Fwu et al., 2021, 2022). From birth, individuals are situated within the Five Cardinal Relationships and are expected to fulfill the role obligations inherent in each dyadic relationship to meet the expectations of significant others. Society uses the extent to which an individual strives to fulfill these role obligations as a key standard for

judging personal virtue, which serves as a manifestation of one's moral self-cultivation. In summary, the underlying reasoning is as follows: "Striving to achieve the goals expected by significant others → fulfilling role obligations → demonstrating personal virtue → enhancing inner moral self-cultivation" (Fwu et al., 2021).

At the individual level, the more one strives to fulfill their role obligations, the more their virtue and moral self-cultivation are revealed. Individuals who fulfill their role obligations to a greater extent are perceived as more morally upright, more aligned with commoner ethics (ethically correct), feel at peace with themselves and their significant others, and ultimately achieve a state of psychosocial homeostasis. When one's actions fall short, self-reflection is necessary. Those who fail to fulfill their role obligations often receive lower moral evaluations and may feel they have disappointed themselves and their significant others, making it challenging to attain psychosocial homeostasis (Fwu et al., 2021).

At the societal level, if each individual fulfills their appropriate role and obligations within dyadic relationships, harmonious interpersonal relationships can be maintained, thereby establishing a harmonious society.

Among the Five Cardinal Relationships, the most significant and inseparable throughout one's life is the blood-related parent-child relationship. "Parental benevolence and filial piety" represent the respective role obligations that parents and children are expected to fulfill (Hwang, 1999, 2012). Parents perceive their children as extensions of their own lives and the hope for the future. Consequently, they fulfill their role obligation of "benevolence" by striving to provide the best resources, care, and education for their children, thereby helping them achieve the goals expected by society. On the other hand, "To raise without teaching is the fault of the father"; through the process of socialization that involves both rewards and punishments, parents supervise their children in fulfilling their role obligations to meet societal expectations.

Children, in return for their parents' sacrifices and dedication, fulfill their role obligation of "filial piety" by striving to achieve the goals expected by society, thereby "bringing honor to themselves and glory to their parents" to satisfy their parents' expectations. In East Asian societies, particularly within the Confucian cultural sphere, children's efforts to pursue socially expected goals are often motivated by the desire to fulfill the role obligation of filial piety in the parent-child ethical relationship. Through these efforts, they not only demonstrate personal virtue but also enhance their inner moral self-cultivation.

If an individual's actions do not yield the desired results, it is essential to reflect on whether they have genuinely fulfilled their role obligations. If one has not done so, one will feel ashamed before oneself and one's parents. Role obligations embody the elevation of moral self-

cultivation and are closely tied to the achievement goals expected by society (and parents), striving for and achieving these goals is a manifestation of both “ethics” and “morality.”

3. The Applicability of Role Obligation Theory of Self-Cultivation to Achievement Goals

My research group and I have categorized the achievement goals pursued in Confucian societies into two types: “vertical goals” and “non-vertical goals” (Fwu et al., 2016, 2017b). “Vertical goals” refer to those that are socially expected; individuals strive to ascend the vertical “achievement pyramid” to fulfill parental expectations and bring honor to their families (Chen et al., 2009), which serves as the primary achievement motivation. This concept is similar to the traditional progression of scholars in ancient China—from passing the local, prefectural, and provincial exams (xiuca, juren), to becoming a “gongshi” in the capital, and finally passing the imperial examination to become a “jinshi,” thereby achieving fame, securing official positions, and bringing glory to one’s ancestors.

In today’s context, vertical goals include socially expected achievements, such as obtaining good grades, being admitted to prestigious schools, securing good jobs, and building a positive reputation. In contrast, non-vertical goals are less subject to social expectations and align with the “ethics of autonomy” found in Western societies, where individuals pursue goals based on their own intrinsic motivation, such as developing skills in sports or the arts.

Compared to non-vertical goals, vertical goals are characterized by higher parental expectations, greater social importance, stronger sense of obligation, more intense peer competition, and a lower degree of personal choice (Fwu et al., 2016, 2017b), which makes them culture-bound. When examining Chinese views on education, if Western theories that focus solely on autonomous intrinsic motivation are directly applied to Confucian societies—without distinguishing between these two types of achievement goals—can hinder a comprehensive understanding of the learning experiences of Chinese students.

I contend that the Role Obligation Theory of Self-Cultivation applies only to vertical goals and not to non-vertical goals. This position is based on the previously discussed concept of the “hard core” in Lakatos’s scientific research program. The Role Obligation Theory of Self-Cultivation serves as the “hard core” of my series of studies. In order to protect this hard core, an auxiliary hypothesis regarding the types of achievement goals: the theory applies only to vertical goals.

For instance, when children diligently study in pursuit of vertical goals, they fulfill their role obligation of filial piety. On one hand, this behavior demonstrates personal virtue and

enhances moral self-cultivation; on the other hand, it conforms to ethical norms, leaving them with a clear conscience both before themselves and their parents, thereby achieving a state of psychosocial equilibrium. If they fail to achieve their goals—such as performing poorly academically—they should reflect on themselves to determine whether they have truly fulfilled their role obligation to study diligently. If not, they may experience feelings of shame in relation to themselves and their parents, motivating them to strive for self-improvement.

It is worth noting that parents' expectations for vertical goals are constantly raised, always seeking better and better outcomes. Therefore, even if children temporarily meet these standards, they must continue to cultivate themselves and strive for further progress without pause. In contrast, the pursuit of non-vertical goals is less constrained by role obligations and is less related to moral self-cultivation or feelings of guilt.

IV. Chinese Views on Education

To facilitate the explanation of the empirical research in the following section, this section will first introduce Western perspectives on education, followed by an explanation of Chinese views on education. By contrasting the differences between the two, the unique characteristics of Chinese views on education can be emphasized.

1. Western Perspectives on Education

(1) The Meaning of Education

Western societies emphasize that the origin of individual life comes from God. The English word “gift” carries two meanings: “present” and “talent,” implying that the Creator, God, bestows each person with a unique “gift,” which represents their inherent “talent.” The term “education” is derived from the Latin noun “educare,” which in turn comes from the verb “educere,” composed of “e” (meaning “out”) and “ducere” (meaning “to lead”). Therefore, education involves drawing out the talents bestowed upon individuals by God, allowing their abilities to be fully realized.

This concept aligns with Covington’s (1992, 1996, 1998, 2000) self-worth theory of achievement motivation, which proposes that human value is equivalent to one’s ability to achieve goals. Understanding one’s self-worth primarily involves understanding the level of one’s abilities. Individuals may be more gifted in academic fields or the arts, with no inherent

hierarchy between the two. Regardless of the field, the educational process encourages individuals to develop in directions where they have potential, reflecting Western society's greater acceptance of the value of diverse development.

(2) The Nature of Ability and Ability Attribution

Within this context, Dweck and Leggett (1988) proposed the “implicit theory,” which suggests that individuals' beliefs about the malleability or fixedness of personal traits (including intelligence or ability) can be categorized into two types: entity theory and incremental theory. Entity theory posits that personal traits are fixed and unchangeable, while incremental theory holds that personal traits are malleable and can be changed through effort. This implies that effort serves as a means and thus possesses instrumental value.

Weiner's (1986) “attribution theory” categorizes attributions for success and failure into four factors: ability, effort, luck, and task difficulty. This classification is based on three dimensions: internal/external, stable/unstable, and controllable/uncontrollable. Ability is considered an internal, stable, and uncontrollable factor, while effort is seen as an internal, unstable, and controllable factor; these two factors are mutually exclusive.

Cross-cultural studies have demonstrated that, regarding implicit theories, individuals from Western cultures often adopt the entity theory of intelligence, believing that individual ability is fixed (Dweck, 1999). In the context of attribution theory, research indicates that Americans tend to favor the ability model (Stevenson & Stigler, 1992), attributing academic success or failure to ability, which is perceived as an internal, stable, and uncontrollable factor.

(3) Self-Enhancement, and the Complementary Relationship between Ability and Effort

Given that Westerners tend to believe ability is innate and unchangeable, parents in child-rearing and teachers in education frequently encourage individuals to develop their talents in areas where they show talent or ability, expecting outstanding performance and thereby reinforcing the entity theory of ability. People tend to praise the talent and abilities of successful individuals with the intention of helping children achieve self-enhancement in areas where they excel (Kitayama et al., 1997), thereby boosting their self-esteem or self-concept and building their self-confidence. From a Western perspective, praising someone for being intelligent or capable (praise ability) is seen as praising the person, serving as a compliment to the individual. In contrast, praising someone for their effort (praise effort) is perceived as praising the process

(Dweck, 1999, 2000; Kamins & Dweck, 1999; Mueller & Dweck, 1998). However, such praise implicitly suggests that the individual is not intelligent enough or lacks ability, and therefore is not considered a genuine compliment.

From a developmental psychology perspective, Folmer and colleagues (2008) investigated how children aged 5 to 15 perceive the relationship between ability and effort when facing failure. The results indicated that this relationship between the two shifts from positive in early childhood to negative in the upper grades, and this transition is quite stable. Young children tend to conflate ability and effort, interpreting that intelligent children are also diligent. In contrast, older children begin to see the two as opposing concepts, believing that those with high ability can achieve success with little effort, while those who must exert significant effort to attain high performance are often perceived as less intelligent or less capable. Therefore, for older children, praising effort is not only seen as lacking in sincerity but may even be interpreted as sarcasm or criticism.

(4) *Mindset Orientation*

In response to the aforementioned Western emphasis on innate cognitive abilities, Li (2012), in her book “Cultural Foundations of Learning: East and West,” points out that Western societies view learning as mind-oriented, with the goal of understanding the external world. Throughout the learning process, the brain’s mental activities encompass active engagement, exploration and inquiry, critical thinking, and self-expression/communication.

“Active engagement” refers to students’ proactive participation in the learning process, which includes activities such as reading, researching information, conducting experiments, writing reports, and participating in field visits. “Exploration/inquiry” emphasizes that students should identify research questions and then use both their minds and hands to explore and solve problems. “Critical thinking” indicates that students should not only pursue knowledge but also maintain a critical and questioning attitude toward the knowledge they acquire in their pursuit of truth. The outcomes derived from active engagement, exploration, and critical thinking must be effectively communicated through oral or written means.

(5) *The Morality of Effort*

Although Western societies place a high value on cognitive abilities, there is also a tradition of valuing effort, primarily influenced by the Protestant doctrine of “predestination.” This doctrine of predestination asserts that God determines who will ascend to heaven and who will descend to hell. Whether an individual is among God’s chosen has already been predetermined by God before birth, leaving individuals with no control over their own fate. The only course of action available to a person is to work diligently day and night, accumulate wealth, and lead a frugal and industrious life to “glorify God, to prove themselves as one of God’s chosen and attain salvation (Weber, 2001).


To this day, the Protestant work ethic emphasizes that obtaining wealth and success through hard work and thrift is a personal duty and responsibility, thus endowing it with moral worth (Weiner, 1994). In the secular world, persistent hard work is regarded as a virtue, and this belief is prevalent in both continental Europe and North America (Weber et al., 2002).

2. Chinese Views on Education

Scholars have adopted a “pan-cultural research approach,” utilizing Western theories as a foundation to place the learning and performance of students from non-Western societies within the framework of Western theories for cross-cultural comparative studies. For instance, research in cross-cultural comparisons has demonstrated that, in terms of implicit theories, East Asian students tend to embrace the “incremental theory of intelligence,” believing that individual abilities are malleable and can be changed through effort (Dweck et al., 1995). In terms of attribution theory, East Asian students tend to adopt the effort model, attributing academic success or failure to their level of effort (Stevenson & Stigler, 1992). In this context, effort is considered an internal, unstable, and controllable factor.

However, if these results are viewed from the perspective of the “Confucian cultural system,” alternative interpretations may arise.

(1) The Meaning of Education

The meaning of education in Chinese society differs from that in the West. The oracle bone script for “教”  originally consisted of two “乂” symbols on the upper left, which represent calculation or divination; a figure of a child with a large head and a small body on the lower left; and, on the right, an image of a hand holding a stick. In short, it illustrates an adult

using a stick to teach a child how to calculate. The ancient idea that “strict teachers produce outstanding students” is vividly reflected in the character “教.”

The oracle bone script for “育” 𠂔 shows a woman above and a child below, symbolizing the act of childbirth. Xu Shen’s “Shuowen Jiezi” explains: “教, what is practiced by those above, is followed by those below; 育, to raise children so that they do good. “教” refers to a knowledgeable individual in a higher position who imparts knowledge and skills, while the less knowledgeable imitate and learn to acquire knowledge and skills. It also means that elders set a positive example for juniors to imitate and follow. “育” means raising children or nurturing young individuals to perform good deeds or become virtuous individuals.

This demonstrates that Western education emphasizes drawing out the potential endowed to learners by God, which is related to the mind, whereas Chinese education prioritizes the acquisition of knowledge and the cultivation of virtuous behavior. This indicates that, in addition to knowledge, Chinese education is also closely linked to moral character.

(2) Sense of Obligation and Self-Exertion Attribution

The aforementioned implicit theory proposed by Dweck and Leggett (1988) emphasizes the “possibility of changing trait” at the individual level. However, from the perspective of Confucian “role-obligation theory of self-cultivation,” especially regarding vertical goals shaped by social expectations—such as academic achievement, “changing trait is not only possible,” but also “an obligation of the individual.” Therefore, the self in Confucian society is neither fixed nor immutable. On the contrary, the self is not only capable of change (possible) but is also required to change (obligatory) and must continuously cultivate itself toward the ultimate good, without end (Fwu et al., 2021).

In summary, this obligation-oriented implicit theory includes three levels: First, change is possible; Second, change should be toward goodness or virtuous direction; Third, individuals have an obligation to continuously cultivate themselves, moving toward goodness or virtuous direction.

The “possibility of change” within this obligation-oriented perspective resonates with the findings of Heine et al. (2001), which indicate that East Asian societies tend to hold an incremental view of ability. This suggests that the obligation-oriented perspective includes the “incremental theory” of Western implicit theories. Furthermore, the idea that “individuals have the obligation to continuously cultivate themselves toward a good or virtuous direction,” this highlights the uniqueness of Confucian culture.

In the context of attribution theory, Confucian societies emphasize the idea that “when one’s actions do not yield the desired results, one should turn inward and examine oneself.” Diligently striving toward vertical goals is considered an individual’s role obligation. For students, when academic performance is unsatisfactory, they are expected to engage in self-reflection to determine whether they have genuinely fulfilled their role obligation of working hard and studying diligently. Therefore, the understanding of ability and effort is understood differently compared to Western perspectives.

Although both Westerners and East Asians regard ability as an internal factor, there are differences in terms of stability and controllability. For East Asians, the perception of ability often varies depending on the context. At times, individuals may express, “I don’t have a math gene,” which implies that ability is perceived as an internal, stable, and uncontrollable factor. Conversely, they might say, “Ability can be developed,” indicating that ability is seen as an internal, unstable, and controllable factor.

As for effort, due to the previously mentioned sense of obligation and the belief in “as Heaven maintains vigor through movement, a gentleman should constantly strive for self-improvement,” people are expected to emulate the principles of nature and consistently exert effort at all times. Regardless of the circumstances, effort is always necessary (Li, 2012). Therefore, effort is perceived as an internal, stable, and controllable factor, which differs from the Western perspective that categorizes effort as internal, unstable, and controllable.

(3) The Positive Relationship among Self-Improvement, Ability, and Effort

Confucian societies hold the belief that when individuals are unable to attain a state of perfection, they should engage in self-reflection. The purpose is to help children continuously pursue “self-improvement” (Kitayama et al., 1997) in areas where they are weak or lacking, with the expectation that they will become better each day, ultimately achieving “self-perfection.” Language is a vehicle for culture, and cultural traditions are embedded in commonly used idioms. For instance, phrases such as “diligence can make up for a lack of talent,” “if others can do it once, I will do it a hundred times; if others can do it ten times, I will do it a thousand times,” and “with diligence, nothing in the world is difficult” all encourage individuals to compensate for insufficient ability through hard work. Chinese people tend to believe that ability and effort are positively correlated (Hong, 2001). Empirical research by Salili and Hau (1994, p. 233) also indicates that Chinese students perceive ability and effort as

positively related: the more effort one puts in, the higher one's ability; those with higher ability must have worked very hard. The underlying belief is that effort is a good way to achieve success. Effort allows those with less natural ability to "make up for their shortcomings through diligence," while those with more ability can "strive for excellence and reach new heights." Therefore, effort is seen as a means to improve ability, demonstrating its "instrumental value." This perspective is different from the Western view, which often sees effort and ability as mutually exclusive.

(4) *Virtue-Oriented*

From the aforementioned explanation of "education" in the *Shuowen Jiezi*, it is clear that Chinese education not only involves the acquisition of knowledge but also pursues goodness and is closely related to moral character. This perspective aligns with Li (2012), who pointed out that for the Chinese, learning is not merely about acquiring external knowledge; it places a stronger emphasis on moral cultivation and is fundamentally virtue-oriented. The process of learning includes the following characteristics: earnestness, diligence, concentration, resilience in the face of hardship, and perseverance.

Earnestness refers to treating learning as a serious matter and approaching it with a solemn attitude, as in the saying, "Excellence comes from diligence, while neglect leads to decline." Diligence refers to an unremitting effort in the learning process, resulting in outcomes such as "diligence can compensate for a lack of talent," "practice makes perfect," and "striving for excellence." Concentration means being fully attentive during learning, free from distractions, as in "immersed in study," or "paying no attention to anything outside the window, focusing only on the classics." Endurance of hardship signifies that learning is a duty one must fulfill, which requires enduring hardships, as in "tying one's hair to a beam and stabbing one's thigh to stay awake," or "without enduring the bitter cold, how can the plum blossom smell so sweet?" Perseverance means that, regardless of the obstacles that may arise during the learning process, one must overcome them, as demonstrated by the adage "sincerity can move even metal and stone," or "the foolish old man moves the mountain."

All of these traits in the learning process are associated with moral cultivation and are therefore called "learning virtues." This contrasts with the Western emphasis on a mind-oriented approach.

(5) *The Morality of Effort*

In Chinese society, students are expected to work hard and study diligently under all circumstances. This diligence and commitment to academic excellence are commonly regarded as expressions of filial piety and the fulfillment of one's obligations toward their parents (Tao & Hong, 2014). Such dedication not only demonstrates personal virtue but also enhances one's inner moral cultivation. The ideal individual in Confucian society is a student who excels in both character and academics, with "moral excellence" taking precedence over "academic excellence." School education emphasizes the balanced development of five domains—morality, intellect, physical fitness, social skills, and aesthetics—with moral education placed first, ahead of intellectual education, highlighting the priority of character over knowledge.

During the learning process, students, regardless of their intelligence, are expected to work hard (moral excellence) to achieve academic success (academic excellence), thereby gradually striving to excel in both character and knowledge. By fulfilling their role obligations, students do not feel ashamed toward their parents' upbringing. Conversely, failing to meet these obligations not only reflects a lack of moral character but also brings shame to their parents. This echoes Xunzi's assertion in his "Encouragement to Learning" essay: "Where does learning begin and where does it end? In practice, it begins with reciting the classics and ends with studying rituals; in principle, it begins with becoming a scholar and ends with becoming a sage. With true accumulation and perseverance, one can enter the way. Learning only ends at death. Thus, the practice of learning may have an end, but its meaning cannot be neglected even for a moment. To pursue it is to be human; to abandon it is to be like an animal." This shows that only through diligent learning can one embody the unique human virtues of benevolence and righteousness, thus becoming truly human; otherwise, one is no different from animals. This demonstrates that effort itself is an end, possessing moral value.

It is worth noting that while both Eastern and Western societies emphasize the moral value of effort, the Western perspective originates from the Protestant work ethic, whereas the Confucian tradition has a different foundation.

Secondly, sayings such as "Learning is like rowing upstream; not to advance is to fall back" and "Mastery is achieved through diligence, while neglect leads to failure" suggest that even intelligent individuals, if they do not study diligently and persistently, will ultimately become "promising in youth but disappointing in adulthood." Those who succeed solely through talent without effort are considered regarded to have gained something without working for it—this is merely "small cleverness." Effort demonstrates that a person is serious,

responsible, and fulfills their obligations. Therefore, to praise someone for being “hardworking” is to praise their virtue and moral character; in this way, “praising effort” and “praising the person” become one and the same. This perspective contrasts with the Western context, where praising someone for their hard work can sometimes imply a lack of ability.

Moreover, considering the moral and instrumental value of effort, parents in raising children and teachers in educating students often praise successful individuals for their hard work as a form of affirmation. They seldom praise innate ability or talent to prevent students from becoming complacent and lazy due to overconfidence in their intelligence. This approach also contrasts with the Western practice of praising the talents and abilities of successful individuals.

V. Empirical Research

There are three primary sources of scientific research problems: (1) inconsistencies between theory and observational or experimental results; (2) internal contradictions within a theoretical system; and (3) conflicts between two different theories (Hwang, 2001, p. 140). The research problems addressed by my colleagues and me primarily arise from inconsistencies between theory and observed phenomena, as well as from cross-cultural studies that reveal differing phenomena between Eastern and Western contexts. The findings from this series of empirical research are explained in five sections. These results are discussed within the framework of the role obligation theory of self-cultivation, in order to highlight their significance.

1. Success and Failure: The Effects of Goal Type and Effort Level on Moral Image and Reward/Punishment Behavior

Cross-cultural empirical research has demonstrated that North American students tend to attribute success and failure to ability, while East Asian students attribute them to effort (Stevenson & Stigler, 1992). The research question posed by my colleagues and me is: Why do East Asian students place such a strong emphasis on effort? During the socialization process of adolescents, do adults (parents and teachers) transmit cultural beliefs about effort through rewards and punishments?

The research findings indicate that, compared to non-vertical goals, when succeeding in vertical goals, those who make effort are perceived as having a more positive moral image of

being conscientious and responsible than those who do not make effort, and they also receive more praise. In the case of failure, individuals who do not make an effort toward vertical goals are seen as having the worst moral image and receive the most blame (Fwu et al., 2016).

Furthermore, both adults and adolescents agree that, for vertical goals, the more effort one puts in, the more favorable one's moral image becomes; and the more favorable one's moral image, the higher the likelihood of receiving rewards (Effort → High Moral Image → Reward). It is evident that during the socialization process of adolescents, adults transmit cultural beliefs such as "Heaven rewards the diligent" and "You reap what you sow." Adolescents receive these beliefs and internalize them as their own (Fwu et al., 2014).

These two studies highlight three distinctive aspects of Chinese views on education: (1) Western self-determination theory suggests that as long as goals are chosen based on personal interests and intrinsic motivation, all goals hold equal importance, with no hierarchy among them. Regardless of the type of goal, failures receive less blame, while successes receive greater praise, with rewards for success focusing mainly on "outcomes" (Hamilton et al., 1988, 1990; Lourenço, 1994). In Confucian societies, however, both the type of goal and the level of effort influence reward and punishments. When the role obligation theory of self-cultivation is applied to vertical goals, its significance becomes evident. For vertical goals, adults consider not only the "outcome" but also the "process" of effort when rewarding or punishing students, thereby valuing both results and processes. This demonstrates the culture-bound nature of vertical goals. (2) Dweck's (1999, 2000) incremental theory points out that effort can enhance ability, indicating that effort has instrumental value. The Confucian belief that "diligence compensates for lack of ability" is similar to this instrumental value of effort. However, for vertical goals in Confucian societies, effort also carries strong "moral value." Therefore, those who achieve success through effort are praised for "Heaven rewards the diligent," while those who attain success without effort receive less praise due to "gains without labor." (3) Weiner's (1986) attribution theory suggests that ability is an uncontrollable factor, while effort is a controllable factor, and the two are mutually exclusive. Based on this foundation, scholars (Dweck, 1999, 2000; Kamins & Dweck, 1999; Mueller & Dweck, 1998) have argued that praising "intelligence" is "person praise," while praising "effort" is "process praise," and the two are mutually exclusive. However, in Confucian societies, when it comes to vertical goals, praising an individual's "effort" is also a form of "person praise." Therefore, process praise and person praise are integrated and not mutually exclusive.

2. Failure: The Effects of Goal Type and Effort Level on Moral Image and Emotional Distress

Covington and colleagues (Covington, 1984; Covington & Omelich, 1979), based on the self-worth theory of achievement motivation, found that for American students, exerting effort in the face of failure can help avoid punishment from teachers. However, if a student tries hard but still fails, it may indicate a lack of ability, thereby damaging their self-worth—rendering effort a double-edged sword. Our research question is: In Confucian societies that emphasize effort, is effort also a double-edged sword? Does the Confucian cultural system have a psychological mechanism to alleviate negative outcomes?

The research findings indicate that, in the context of failure associated with vertical goals, effort is indeed a double-edged sword: failing despite exerting effort leads to feeling bad (emotional distress), while failing without effort results in a loss of moral image (being bad). This creates a dilemma where both making an effort and not making an effort have negative consequences. The double-edged sword effect is much more pronounced for vertical goals than for non-vertical goals (Fwu et al., 2017b).

In addition, regarding vertical goals, the Confucian belief in “doing one’s utmost” helps reduce the emotional distress associated with failure. After self-reflection (“when things do not go as desired, one should examine oneself”), if one feels they have done their best to fulfill their filial duties to their parents, the negative emotions from failure are lessened (Fwu et al., 2017a).

These two studies demonstrate that, in both Western and Confucian societies, effort serves as a double-edged sword; however, the implications differ—especially when the role of obligation theory in self-cultivation is applied to vertical goals, which emphasizes four key points. (1) In the West, the double-edged nature of effort stems from a lack of ability, which damages self-worth. In contrast, within our society, the double-edged sword arises from insufficient effort toward vertical goals, indicating a failure to fulfill one’s role obligations and resulting in a loss of moral image. (2) According to Protestantism, effort aligns with the work ethic, so teachers do not punish students who try hard. On the other hand, students often interpret failure, despite their efforts, as an indication of insufficient ability. In Western culture, this creates a double-edged sword: while effort may help students avoid punishment from teachers, it also reveals one’s lack of ability, creating an “inter-personal conflict” between the beliefs of teachers and students. In our society, individuals who make an effort gain a positive moral image, but if their efforts do not bring good results, they may experience emotional distress, resulting in an “intra-personal conflict.” Failing despite effort can lead to feeling bad,

while failing without effort results in a loss of moral image, creating a dilemma where both making an effort and not making an effort carry negative consequences. (3) In Western societies, the dual nature of effort is not limited to specific domains; however, it is much more pronounced for vertical goals compared to non-vertical goals, demonstrating the culture-bound nature of vertical goals. (4) For vertical goals, although effort can be a double-edged “sword,” after self-reflection, if one feels they have “done their utmost” to fulfill their obligations to their parents, it can alleviate the negative emotional distress. The belief in “doing one’s utmost” thus serves as a “shield” for self-protection.

3. The Psychological Process and Dilemma of Persisting in Effort (Behavioral) After Failing to Achieve a Vertical Goal

Heine et al. (2001) and Zhang and Cross (2011) found that, in Western societies, students tend to persist after experiencing success. In contrast, East Asian students tend to continue in their efforts after experiencing failure. Our research question is: What is the psychological process underlying the continued effort of East Asian students after academic failure?

Schmidt and Weiner (1988), in order to explain the psychological mechanisms of human behavior, proposed the 3A model (attribution → affection → action), which suggests that cognition influences emotion, which in turn influences behavior. Given that Confucian societies emphasize “effort” and the cultural belief of “when things do not go as desired, one should examine oneself,” we developed two belief constructs based on the instrumental and moral value of effort: the “effort-progress belief” and the “effort-obligation belief.” We further proposed the B-3A model (belief → attribution → affection → action) to explain the process of self-reflection following failure.

The results indicated that individuals who subscribe to the effort-obligation belief, after self-reflection, if they feel they have not fulfilled their role obligation, they experience negative emotions such as guilt toward their parents and themselves. In order to escape from these negative emotions, they are motivated to persist in their efforts and strive for academic success (Fwu et al., 2018).

Another study found that after academic failure, students experience two types of negative emotions simultaneously: activating emotions such as guilt, and deactivating emotions such as hopelessness. Because academics are considered a vertical goal, the activating emotion of guilt motivates students to continue striving for success in order to escape negative emotions, while

the deactivating emotion of hopelessness causes them to lose motivation. As a result, students are caught in a dilemma, torn between persistence and giving up (Fwu et al., 2021).

These two studies reveal six characteristics of Chinese views on education: (1) The widely cited “implicit theory of ability” proposed by Dweck (1999, 2000) lacks predictive power in our model. In contrast, the “effort-progress belief” and “effort-obligation belief” derived from the role obligation theory of self-cultivation do have predictive power and influence persistent effort through different pathways. This highlights the challenges of applying Western theories to explain East Asian students’ learning, but beliefs developed from the Confucian cultural system can help explain these phenomena. (2) The focus of “self-reflection” differs between Western and Confucian societies. Western cultures emphasize cognitive aspects such as critical thinking and problem-solving (Dewey, 1933; Schön, 1995), while Confucian societies emphasize self-examination, reflecting on whether individuals have fulfilled their responsibilities and filial obligations to parents—the moral dimension. (3) Western scholars find it difficult to understand the concept of indebtedness, and have suggested using the term “guilt” instead. However, these two terms are fundamentally different. Guilt refers to “doing something one should not have done,” such as feeling guilty after stealing. Indebtedness (愧疚感), on the other hand, refers to “not doing something one should have done,” for example, diligent study is a child’s role obligation; if one does not “do one’s utmost,” one feels indebted. (4) Generally, negative emotions tend to sap motivation and lead individuals to give up. Pekrun and colleagues (2006; Pekrun & Stephens, 2010) categorized negative emotions into activating and deactivating types; however, few studies have noted that both can occur simultaneously. After academic failure, Chinese students experience both deactivating negative emotions (such as hopelessness) and activating negative emotions (such as indebtedness), resulting in a dilemma. (5) Indebtedness can be categorized into two types: feeling indebted to one’s parents and to oneself. Since vertical goals originate from parental expectations, feelings of indebtedness to parents typically arise first. It is only when these feelings are internalized as indebtedness to oneself that the motivation to persist begins to emerge. (6) Students in the Confucian cultural sphere experience lower psychological well-being than those in Western countries (Lee, 2009; Liu et al., 2017; Morony et al., 2013; Stankov, 2013). The possible reason is not only the negative emotions, such as sadness brought by failure, but also to the push of indebtedness that compels individuals to strive, alongside the pull of hopelessness that hinders effort. The tension between these two forces creates a dilemma, making it challenging for students to move forward or retreat.

4. A Re-examination of Covington's Four-Quadrant Model of Achievement Motivation in Confucian Societies

Covington (1991), based on self-worth theory, proposed the quadripolar model of achievement motivation, which utilizes two dimensions—hope for success and fear of failure—to categorize students into four types: overstrivers (high hope for success, high fear of failure), optimists (high hope for success, low fear of failure), self-protectors (low hope for success, high fear of failure), and failure acceptors (low hope for success, low fear of failure). Among these categories, overstrivers and self-protectors often exhibit avoidance behaviors and experience negative emotions due to their fear of failure. Our research questions were: Is this classification applicable to Confucian societies? How do the behaviors and emotions of each type of student differ?

Our findings revealed that Covington treated fear of failure as a singular factor. However, based on the role obligation theory of self-cultivation, “fear of failure” actually consists of two factors: fear of disappointing oneself and the fear of letting important others (such as parents) down. Furthermore, students can be categorized into six types: the original four types accounted for only 50% of the sample, while two additional Confucian-specific types—Confucian overstrivers and Confucian self-protectors—accounted for the remaining 50%.

Third, while overstrivers and self-protectors indeed experienced elevated levels of anxiety, 50% of Confucian overstrivers and 44% of Confucian self-protectors reported good psychological well-being. Furthermore, the proportion of Confucian overstrivers (30%) exceeded that of overstrivers (23%), and their willingness to take risks was slightly higher. The proportion of Confucian self-protectors (20%) surpassed that of self-protectors (13%), with their willingness to take risks being significantly higher (Li et al., 2023).

This study highlights three characteristics of Confucian societies: (1) In the context of Western individualism, “fear of failure” is regarded as a singular factor. However, from the perspective of the role obligation theory of self-cultivation, “fear of failure” consists of two factors: fear of disappointing oneself and the fear of disappointing significant others, which underscores the distinctiveness of Confucian culture. (2) Covington's four-quadrant model can only explain about half of the student types, and fails to account for the other half. This demonstrates that the blind application of Western models to non-Western contexts is frequently irrelevant and incompatible with understanding the mindset of non-Western individuals. (3) International academic assessments have indicated that East Asian students experience a greater fear of failure than Western students, with Taiwan being the country most

afraid of failure among the more than seventy nations participating in the assessment (OECD, 2019). East Asian students also tend to have poorer psychological well-being compared to their Western counterparts (Lee, 2009; Liu et al., 2017; Morony et al., 2013; Stankov, 2013). However, Confucian overstrivers and Confucian self-protectors demonstrate better psychological well-being and a greater willingness to take risks than overstrivers and self-protectors. Without referencing the role obligation theory of self-cultivation to distinguish Confucian overstrivers and Confucian self-protectors from overstrivers and self-protectors, it would be challenging to fully capture the complexities of East Asian students.

5. The Impact of Teacher Feedback on Student Learning Motivation

Rattan et al. (2012) found that when first-year students at top U.S. universities performed poorly on their initial calculus exam, instructors with an “entity theory” mindset often provided ability-based comforting feedback, such as, “It’s okay, not everyone is good at math.” Unexpectedly, students interpreted this as the teacher believing they “lacked mathematical talent,” which led them to give up on pursuing opportunities in STEM fields. This phenomenon has raised concerns within the American education sector about its potential impact on national competitiveness. Our research questions were: In Confucian societies, what type of feedback do teachers provide when students struggle in mathematics? How does this feedback affect students’ motivation to learn?

The research results indicated that teachers with an entity theory mindset provided Western-style, ability-based comforting feedback, such as, “It’s okay, not everyone is good at math.” In contrast, teachers with a duty-based mindset gave Eastern-style, duty-based comforting feedback, such as, “It’s okay, your learning attitude is more important than the result,” or gave advice-oriented feedback, such as, “You reap what you sow; keep working hard.”

Secondly, when students received Western-style comforting feedback, they tended to give up; when they received Eastern-style comforting or advice-oriented feedback, they tended to persist and continue working hard. Third, 40% of teachers preferred to provide Eastern-style comforting and advice-oriented feedback, while 60% of teachers tended to give a combination of Western-style comforting, Eastern-style comforting, and advice-oriented feedback (Fwu et al., 2022).

These findings demonstrate that relying solely on the Western “entity theory” framework is insufficient to fully explain the phenomena of teacher feedback and student learning motivation in Confucian societies.

(1) Both Eastern and Western educators who hold an entity theory provide ability-based feedback, which demonstrates no cultural differences (culture-free). However, teachers with a duty-based mindset give duty-based feedback, emphasizing cultural particularity (culture-bound) and echoing the role obligation theory of self-cultivation. (2) Ability-based feedback leads students to interpret their poor performance as a lack of ability, which is perceived as beyond their control; as a result, they may lose hope for the future and may give up on STEM subjects. In contrast, duty-based feedback leads students to interpret their poor performance as a failure to do their best, which is within their control; therefore, they remain optimistic about future success. This underscores the importance of teachers providing feedback with caution to avoid negative effects. (3) Both Eastern and Western comforting feedback aim to reduce students’ stress, but each approach has its advantages and disadvantages. Eastern-style comforting feedback can motivate students to overcome challenges and achieve outstanding results in international academic assessments, thereby cultivating a large pool of STEM talent. However, it may also harm the psychological well-being of those who continue to struggle despite their efforts. Western-style comforting feedback may reduce students’ participation in STEM fields but helps cultivate talent in non-STEM domains. (4) Sixty percent of teachers provide all three types of feedback: Western-style comforting, Eastern-style comforting, and advice-oriented feedback. Western-style comforting feedback tends to encourage students to give up, while Eastern-style comforting and advice-oriented feedback promote persistence. This can create a dilemma for students, who may feel conflicted between giving up and continuing to strive.

6. Implications of the Research Findings

(1) Interpreting Research Findings from the Perspective of Cultural Systems

Empirical research findings must be interpreted within the context of theoretical frameworks to fully reveal their significance. When submitting papers to international journals, Western scholars naturally tend to interpret findings through the lens of established Western theoretical frameworks. However, interpreting non-Western phenomena solely through

Western theories can confine research results within a Western framework, thus distorting their true meaning.

For instance, in Confucian societies, when individuals fail to fulfill their role obligations, they experience a sense of "indebtedness." Reviewers often suggest that I replace this term with "guilt," which is more familiar to them. However, substituting "indebtedness" with "guilt" means the phenomenon must then be interpreted within the context of Christian cultural systems. In Catholicism and Christianity, confession refers to a believer feeling "guilt" after committing wrongful acts, such as theft or murder. The believer confesses privately to a priest, expressing remorse for their misdeeds, and the priest, acting as a representative of God, grants forgiveness.

In contrast, "indebtedness" in Confucian societies refers to the feeling experienced when individuals fail to meet their expected role obligations. For instance, children may feel indebted when they do not study diligently and believe they have disappointed their parents. This emotion can only be fully understood within the Confucian cultural framework. In simple terms, "guilt" refers to "having done something one should not have done," whereas "indebtedness" refers to "not having done something one should have done." The two concepts are fundamentally different.

If non-Western scholars are unaware of the differences between these cultural systems and uncritically adopt Western theoretical concepts, they risk distorting the interpretation of their research findings and, unknowingly, falling into academic colonialism, thereby losing their cultural subjectivity. Similarly, recent educational reforms in Taiwan have frequently imported Western practices without adequately considering the local cultural context, which has, unsurprisingly, led to challenges and criticism.

(2) Psychological Health Issues Arising from Dilemmas

Cross-cultural comparative studies have demonstrated that students in Confucian cultural societies report lower levels of psychological well-being than those in Western countries (Lee, 2009; Liu et al., 2017; Morony et al., 2013; Stankov, 2013). Our research indicates that the poor psychological health of these students may stem from the experience of being caught in dilemmas following their failure to achieve vertical goals. Students who fail without putting in effort are perceived as lacking moral character, while those who fail despite their hard work experience negative emotions. As a result, they find themselves in a dilemma where both exerting effort and not exerting effort appear problematic.

Furthermore, when students experience failure, they may simultaneously experience a sense of hopelessness regarding future success, which can lead to a desire to give up, alongside a sense of indebtedness that motivates them to persist. This creates a dilemma, as they feel trapped between wanting to withdraw and the desire to continue. In addition, our findings indicate that 60% of teachers tend to provide students with a combination of Western-style comforting feedback, Eastern-style comforting feedback, and Eastern-style exhortation when students perform poorly. Western-style comfort tends to encourage students to give up, while Eastern-style comfort and exhortation motivate them to keep trying. Consequently, when students receive both types of feedback, they face the dilemma of whether to persist or to surrender.

Some may argue that poor psychological health is simply the result of frustration following failure. However, students in Confucian societies often encounter conflicting pressures that pull them in opposing directions. This internal conflict—where moving forward or retreating both seem unviable—may be a significant factor influencing their psychological well-being.

(3) Addressing the Dilemma of a Single Large Pyramid with Multiple Smaller Pyramids

Our series of studies has demonstrated that the culture-bound nature of vertical goals leads students in our society to strive to climb a singular, large achievement pyramid to fulfill their role obligations. However, this often results in students becoming trapped in learning dilemmas. Given that Confucian societies tend to emphasize climbing the achievement pyramid, a feasible solution may be to construct multiple, smaller achievement pyramids. This approach would enable students to navigate various types of pyramids and achieve the ideal of cultivating their individual strengths.

The concept of multiple pyramids can also be extended to university faculty promotion and university typologies. If academic publications are the sole criterion for faculty advancement, educators are compelled to ascend a singular, large "academic publication" pyramid, resulting in dilemmas similar to those encountered by students. By establishing multiple types of promotion pyramids, teachers can better identify their optimal positioning and select the most appropriate pyramid for their advancement. My article, "Alternative Scholarship—The Scholarship of Teaching and Learning" (Fu, 2013), presents one such pathway for diversified faculty promotion, aligning with the Ministry of Education's current initiatives to foster multiple pathways for faculty advancement and the implementation of the Teaching Practice Research Program.

Similarly, if the sole objective of higher education institutions is to become world-class research universities, then all universities are compelled to climb the same singular ranking system, resulting in a similar dilemma. By establishing multiple types of university pyramids, each institution can identify its optimal position and select the most suitable pyramid to pursue. This approach allows students and faculty to develop their strengths on different types of pyramids, and universities to nurture a diverse range of talents within various types of pyramids.

VII. Recommendations

Upon reflecting on my academic journey, I would like to humbly offer the following suggestions to researchers, with the hope that these insights may help them avoid unnecessary detours.

1. Cultivating Problem Awareness by Addressing Research Gaps

To bridge the first major gap between the citation of Western theories and their application in local educational practices, scholars play a crucial role. Currently, universities require faculty members to submit their research findings to international journals indexed by SCI and SSCI for evaluation and promotion, with the hope that their work will be scrutinized by the global academic community, leading to the predicament of “publish or perish.” International academic journals place the highest value on originality and uniqueness. Students from Confucian-heritage cultures often excel in international assessments such as TIMSS and PISA, which has aroused curiosity in the academic community. Nevertheless, due to the challenges Western scholars face in understanding the essence of Confucian culture, their interpretations often remain superficial or even inappropriate. Numerous cross-cultural empirical research findings have demonstrated that the learning and performance of East Asian students do not fully align with existing Western theories. Unfortunately, scholars in Asian Confucian-heritage cultures have not developed relevant theoretical models based on the accumulation of empirical data, nor have they contextualized empirical research findings within theoretical frameworks to highlight their significance and value. This represents a missed opportunity. This research gap presents an opportunity for domestic scholars to conduct original and unique research, which not only facilitates publication in international journals but also helps them gain a voice on the global stage, positioning them as the best bridge for the Western world to understand the theories and practices of the Chinese-speaking world.

But how can one identify and cultivate a sense of problem awareness? There are two potential approaches. First, by examining cross-cultural research findings, one can identify differences between Eastern and Western cultures and explore why students in East Asian countries exhibit different outcomes, as well as the underlying psychological mechanisms (how), thereby highlighting cultural subjectivity. For example, cross-cultural studies have found that, regarding implicit theories, Western students tend to hold an entity view, whereas East Asian students are more inclined toward an incremental view. In attribution theory, Western societies favor an ability model, while East Asian societies tend to embrace an effort model. Researchers may further propose, based on the “role obligation theory of self-cultivation” in the Confucian cultural system, that East Asian students' beliefs are not only incremental but also obligation-oriented; failure is attributed not only to a lack of effort but also to whether one has fulfilled one's duties.

Second, as previously mentioned, there are three primary sources of research questions. In our series of studies, most research questions have emerged from anomalies—cases where theoretical frameworks and empirical phenomena do not align. Typically, we follow a three-step approach to identify research questions: The major premise refers to widely accepted theories or research findings; the minor premise refers to phenomena that are inconsistent with the major premise; and the research questions may include: What are the different outcomes (what)? Why do such inconsistencies occur (why)? And through what psychological mechanisms do they operate (how)?

For instance, existing Western research indicates that individuals who achieve success are often praised, reflecting an outcome-based perspective (major premise). However, in our context, this perspective is not purely outcome-based (minor premise). Consequently, the research questions are as follows: Under what circumstances are successful individuals praised (what)? Why are they praised, as inferred from the role obligation theory of self-cultivation (why)? What are the underlying psychological mechanisms involved (how)?

Addressing these research questions, the findings indicate that only those who achieve success through effort are praised, while those who succeed without effort are not (what). The primary reason is the moral image associated with fulfilling one's role obligations (why). The psychological mechanism operates as follows: When students diligently fulfill their role obligation to study, they are perceived as possessing a moral character—reflecting the belief that “heaven rewards diligence”—and consequently receive praise. In contrast, individuals who attain success without fulfilling their role obligations are seen as lacking a moral image and are

perceived as merely clever, resulting in a lack of recognition. Therefore, in this context, praise takes both the process and the outcome into account (how).

2. Research on Invention from the Perspective of Cultural Systems

Cross-cultural comparative studies with a pan-cultural orientation often rely on Western theories as their foundation to emphasize the differences between Western and East Asian students. A theory is a logical summary inferred by humans about natural and social phenomena, based on existing empirical knowledge, experience, facts, laws, cognition, and verified hypotheses, using methods such as generalization and deductive reasoning. Within the framework of Western theories, the learning phenomena of Western students can be logically explained; however, East Asian students are often positioned within this Western theoretical framework in a way that appears incompatible or irrelevant to their local context. As a result, such research only reveals "what is," but not "why it is so," making it challenging to highlight the subjectivity of the scholars involved.

In light of this, it is recommended to formulate and test research hypotheses based on the hard core of Confucian societies and their cultural systems, as well as to conduct a series of "invention"-oriented studies. This approach aims to achieve not only an understanding of "what is," but also "why it is so," thereby emphasizing the subjectivity of scholars. For instance, based on the hard core of the role obligation theory of self-cultivation, individuals who fulfill their role obligations and possess higher levels of moral cultivation receive more favorable moral evaluations and do not experience guilt. Accordingly, one can infer the influence of effort on moral, emotional, and behavioral aspects within the context of vertical goals shaped by social expectations, and conduct a series of studies based on this basis. However, this hard core does not apply to all types of achievement goals. When auxiliary hypotheses are added, it only holds true under vertical goals shaped by social expectations, but not under non-vertical goals, without challenging the hard core itself.

For instance, in the context of academic failure, a lack of effort leads to a diminished moral image (moral aspect), while putting in effort but still failing results in feelings of sadness (emotional aspect), thus creating a dilemma. This dilemma, however, is less apparent in non-vertical goals. Similarly, compared to practical skills such as drawing, in academic success, those who put in effort are perceived as possessing greater moral character (moral aspect) and receive more praise (behavioral aspect) than those who do not make an effort. In academic failure, those who did not try are seen as having less moral character (moral aspect) and receive

more blame (behavioral aspect) than those who attempted but failed. When students fail academically, on one hand, they feel guilty (emotional aspect) for not fulfilling their obligations and thus continue to put in effort (behavioral aspect) to escape this negative emotion; on the other hand, they may feel despair (emotional aspect) and give up trying (behavioral aspect), leading to a dilemma of whether to persist or to surrender. These findings indicate that if one does not distinguish between vertical and non-vertical goals, the role obligation theory of self-cultivation would collapse.

3. Distinguishing Between Universal Phenomena and Culturally Specific Phenomena

Newton once stated, "If I have seen further, it is by standing on the shoulders of giants." All achievements are accumulated and progressive; without building upon the accomplishments of those before us, progress cannot be expected. When conducting research, non-Western scholars should neither blindly adopt Western approaches wholesale nor reject them entirely. Instead, scholars should stand on the shoulders of giants and investigate the conditions under which phenomena are universal (culture-free) and those under which they are culturally specific (culture-bound), as this approach is more meaningful and valuable.

Since both Westerners and non-Westerners are "human," sharing similar physiological structures, there are phenomena that can be considered culture-free. However, due to cultural differences across regions, there are also culture-bound phenomena. If research results are consistent with established Western theories, this indicates universality (culture-free); if research results differ, this highlights cultural specificity (culture-bound). For instance, our research indicates that individuals who hold Dweck's implicit theory of intelligence tend to provide Western-style feedback to students who perform poorly, which aligns with Western findings and thus demonstrates culture-free characteristics. In contrast, those who adhere to the role obligation theory of self-cultivation are more likely to offer students Eastern-style comfort and advice, reflecting culture-bound characteristics.

According to Lakatos's sophisticated falsificationism, an existing theory can only be considered falsified when a new theory proposed by scientists can explain the previous successes of the old theory or when the new theory incorporates the irrefutable core of the old theory (Huang, 2001, p. 196). If we can distinguish the circumstances under which phenomena are universal (culture-free) from those in which they are culturally specific (culture-bound), then the new theories we generate will not only be able to explain the previous successes of the old theories but also contribute new knowledge, thereby representing the evolution of science.

The British historian Arnold J. Toynbee predicted, “The nineteenth century was the century of the British, the twentieth century was the century of the Americans, and the twenty-first century will be the century of the Chinese.” Among Chinese societies, Taiwan stands out as a nation that has both embraced Western education and preserved a rich Confucian cultural heritage. This unique advantage of integrating both Chinese and Western traditions provides fertile environment for domestic scholars to construct new theories. Therefore, Taiwanese scholars have the greatest opportunity to develop theoretical models that can explain both the phenomena observed in Western societies as well as those that are culture-bound to Confucian societies (Fu & Huang, 2016), thus leading the evolution of science.

VIII. Conclusion

This paper presents the author's intellectual journey in researching Chinese views on education, encompassing philosophical reflection, theoretical construction, and empirical research. Academically, it is anticipated that the research findings will engage in dialogue with Western theories, identifying phenomena that are not influenced by culture and thus demonstrate universality, as well as those shaped by Confucian culture that exhibit culture-bound characteristics. This approach aims to contribute new knowledge to the field. Practically, the evidence-based findings are intended to provide guidance for teaching and learning, reducing complaints about the “uselessness of theory,” and, hopefully, making a meaningful contribution to society—a contribution the author humorously refers to as an alternative SCI (Social Contribution Index). It is hoped that this paper will serve as a catalyst to inspire more scholars to explore the relatively underdeveloped area of Chinese views on education, and to help identify the causes of, and solutions to, the longstanding disconnect between theory and practice.

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