

## 《2017 特刊》 編者的話－弱勢者教育

自 1966 年《Coleman 報告書》提出之後，如何嘗試弭平學生因為個人、家庭甚至是所處社會結構等種種匱乏而成為學校教育的弱勢學生、即引起世界各國的重視。加州州立大學洛杉磯分校教授 Howard Adelman 提出（1992）在學校學習不利的因素可分為三，一群肇因於個人因素（P），包括身心障礙（disabilities）或特質，一群是環境因素（E）所致，包括文化、經濟、地域等，第三種即是個人和環境交互所致（E X P）。國際經濟合作發展組織（OECD）為調查各國提供額外教育支援給各種弱勢學生（稱為特殊教育需求，special education needs，SEN），特將 SEN 分為障礙（disabilities）、困難（difficulties）、和弱勢（disadvantages），也發現各國對這三類和 SEN 的定義不一（2005），可見各國從社會學、心理學、特殊教育服務等不同角度探討一群在學校教育難以平等受惠的學生，試圖提供額外資源以落實積極性的差別待遇。台灣從 1984 的特殊教育法、1995 年開始實施的教育優先區計畫，以及 2005 年的攜手計畫到後來的補救教學方案，都試圖透過不同的補救措施，降低各種不同對學生教育不利之因素對教育之影響力。這數十年餘，不僅是政府，還有很多民間單位投入扶助上述各種弱勢教育的工作，舉凡經濟扶助、獎學金、辦理課業輔導、醫療……等，可看到社會對積極差別待遇之支持行動。

國內研究者順應此風潮，本期特刊得以收到相當多來自不同領域且論述豐富的稿件，在此感謝投稿本特刊的作者們。由於顧及本期刊的屬性及篇幅，編輯委員會員們乃從中遴選較為契合的篇章。這一年來經過嚴格的審查程序，本特刊蒐羅的文章共有六篇，包含四篇研究論文、一篇學術評論以及最後一篇為研究紀要，各包括經濟弱勢、地域弱勢、身心障礙等三種，其中四篇研究論文有三篇以學生為研究主題，包括青少年和小學生，一篇以非營利機構為研究主題，篇數不多但能涵蓋弱勢教育的多面向，學術評論和紀要也從新近之腦神經科學研究成果和研究方法的跨國比較陳

述；本特刊六篇涵蓋社會學、教育學、教育心理、特教和腦神經科學等專業領域，提供弱勢教育多領域的思維。希冀透過本特刊為弱勢教育在理論與實徵研究提供跨領域的論述更添其運用性及啟示。

第一篇文章主題為**經濟弱勢青少年的教師支持、同儕支持、家庭凝聚力與心理資本之關係：台灣貧窮兒少資料庫分析**，作者為國立政治大學的江守峻與陳婉真。本文採用台灣兒童暨家庭扶助基金會的台灣貧窮兒少資料庫進行分析，結果驗證得知教師支持、同儕支持和家庭凝聚力確實可提升經濟弱勢青少年的心理資本（其隱含的自我效能、希望、樂觀與復原力四個正向的心理因素），進而使經濟弱勢青少年保持著較佳的心理素質，以及在未來願意朝著正向且積極的人生發展，得以扭轉其原生家庭的弱勢處境。此研究肯定學校對於經濟弱勢學生的心理資本之重要性，其中女生所得之支持略優於男生，性別在各支持因子的強度略有差異，有助於教學現場在實際運用的啟示。

第二篇文章主題是為**弱勢教育而生：逆轉聯盟能力檢核表之發展與應用**，作者為東海大學陳秋政與財團法人逆轉聯盟協會的柳憶柔。誠如兩位合著作者背景正象徵著學術與實務的結合，本文源自公益平台與誠致基金會發現各課輔機構的困境，期待課輔民間組織之執行團隊更有效率的運作，可使課輔機構更有能量的照顧學童。因此本文旨在探討 2015 年成立之社團法人台灣逆轉聯盟協會【逆轉聯盟】如何創造協力工具，作為實踐其會員組織間大手拉小手的協力策略，透過政策德爾菲問卷、專家座談，以及層級分析問卷調查探討逆轉聯盟為實踐大手拉小手的協力策略，最後建立「課輔機構營運發展檢核表」，用以檢核會員組織的能力建構需求。該表由 6 項主構面、21 項次構面、80 項具體問項組成，用於促進教育類非營利組織間有法有道地分享資源、建立網絡，進而實踐機構的服務使命與願景。

第三篇文章主題為**探索教育活動融入服務學習計畫對都會心靈弱勢兒童之影響研究**，作者是國立台灣體育運動大學師資培育中心的鍾啟暘。不同於過去文獻聚焦於經濟、文化、地域不利因素的相關討論，作者在都會地區發現一群未見於文獻的弱勢，稱為都會心靈弱勢—指稱該群學生處於生活快速步調而缺乏反思、家庭功能失調缺乏關愛、人際關係疏離缺乏安全感等原因，而產生心靈貧乏。本研究透過師培生帶領高中生，

一起與小學生們互動並進行探索教育，運用建構式質性研究分析兩年期間進行參與的師生個別或焦點訪談、參與式觀察及文件分析，以了解活動對於都會心靈弱勢兒童的影響。本文的發現由心理弱勢小學生透過新的人（大學生、高中生）、事（探索教育活動）、物（戶外場地）的刺激，透過活動的引喻連結其日常生活，讓參與的小學生透過直接且具體的體驗，喚醒其無感的心靈，同時也對於同樣參與服務學習的大學生及高中生們達到促進反思的效益。

第四篇文章主題為**偏鄉青少年完成高中職學業的促進因素研究：以某偏鄉國中畢業生為例**，作者是國立彰化師範大學林淑君以及國立臺灣師範大學的王麗斐合著。該篇鑑於偏鄉國中生們未能獲得高中文憑的問題，以國中階段接受心理諮商之個案，追蹤他們高中之適應，藉以了解促進偏鄉青少年完成高中的促進因素。本研究追蹤跨越四屆的偏鄉國中 16 位學生，透過 5 次團體訪談及 1 至 3 次不等個別訪談收集資料，同時訪問該國中主任生。研究結果發現偏鄉國中生升到高中所面臨的困境包括學業困境、到陌生環境的緊張不安、生涯未定向的壓力、以及經濟困難，而支持他們完成高中職學業的核心信念是追求夢想，期間乃透過自我鼓勵或尋求家長、國中端教師的支持，高中端教師和同儕的協助得以克服困難。本文除了提出偏鄉青少年在高中職求學的困境和其所需之支持外，更希冀有助於教育現場人員了解如何有效協助偏鄉青少年完成高中教育之夢想。

第五篇學術評論主題為**從磁振造影研究探討數學學習障礙之認知神經機制**，作者是國立政治大學的張葶葶、龍姿蓁。本文從腦神經科學磁振造影的研究結果說明數學學習障礙的特徵和其認知神經的機制，其收集有關利用磁振造影研究數學學習困難或數學障礙的研究，針對數學障礙的核心缺陷，數字感、數學事實提取、計算正確性或流暢性，以及數學困難常見的工作記憶問題和焦慮等負面情緒之問題，透過磁振造影研究成果指出上述問題之神經機制。本文除介紹磁振造影之技術、原理和所得結果之意義外，並提出數學學習重要腦神經區域，包括後頂葉的頂內溝、角回、緣角回，雙側頂上葉跟計算所需之注意力分配相關。腦神經科學研究顯示數學學習障礙不僅在大腦結構、區域活化和神經迴路異於一般學童之外，也發現有效的補救教學不僅改善數學障礙的數學學習表現，也改善其腦神經之結構、腦區運用狀況與神經迴路。本文期待國內對數學學習障礙之補救

教學或特殊教育應結合腦神經科學研究方法和結果，得以有效及早補教數學學習問題。

第六篇為一研究紀要，從評分者間信度與實驗處理忠實度評析日本與臺灣自閉症單一個案研究品質，作者共有五位，依序是日本筑波大學的 Ee Rea Hong、國立台北教育大學的蔡欣珮與陳佩玉、日本筑波大學的龔麗媛、美國德州農工大學的 Jennifer B. Ganz。本文由跨國合作整理非英語發表期刊，以台灣和日本具有同儕審查且最主要的七本特殊教育期刊、其出版到 2015 年期間，發表有關自閉症介入之單一受試研究方法之研究品質，以作為建立實證有效介入之參考依據。作者經已訂之標準篩選之後再依據標準排除，共得日本期刊 168 篇，台灣期刊 26 篇，結果發現日本的期刊論文在評量者間一致性逐年增加，但台灣論文並未見此現象，台灣期刊論文對於介入程序忠實度已開始有報導，而日本還沒有，兩國之論文在介入程序忠實度尚未成熟。最後對於有關單一受試研究，建議在評量者間一致性和程序忠實度上應該遵照標準執行和報告。

Adelman, H. S. (1992). LD: The next 25 years. *Journal of Learning Disabilities*, 25, 17-21.

OECD (2005). *Special education needs: Statistics and indicator*. Retrieved in <http://www.oecd.org/edu/innovation-education/specialeducationneeds-statisticsandindicators.htm>

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**《2017 Special Issue》**  
**EDITORS' NOTES:**  
**EDUCATION OF DISADVANTAGED STUDENTS**

After the Coleman Report released in 1966, nations worldwide have paid attention to the ways to enhance the education of disadvantaged students due to their insufficiency caused by individual, family and the social structural factors. Dr. Howard Adelman proposed three categories of learning difficulties caused by personal factor and environment factor in 1992. They are personal factors (P), including the disabilities mentally and physically; the environmental factors (E) such as culture, economy, and locations; and third category of factors caused by the interaction between persons and the environment (EXP). OECD (2005) investigated the extra resources provided in school in various countries via defining special education need (SEN) as disabilities, difficulties, and disadvantages but found the definition of SEN varies from country to country. Multi disciplines were found to involve in the study of these disadvantaged students in school and attempt to follow the positive discrimination. Following this trend, with Special Education Act promulgated in 1984, Taiwan began to implement the educational priority areas project on 1995, “Big hands in small hands” in 2005 and then the remedial programs nowadays. These efforts aimed to systematically implement in different areas to reduce the influence of disadvantaged factors. Undoubtedly, the Taiwanese government agencies and non-governmental organizations were involved in educational activities for helping the disadvantaged in the past decades, such as the near-poor household subsidies, all kinds of scholarship to reward excellent students in impoverished family. This reveals all the make-up efforts to follow the positive discrimination for these students with special needs.

Given most researchers following the aforementioned trend and policy, this issue received many papers from various disciplines with rich discourses. Here we are in debt to all authors. The editorial board selected the only papers better matched this special issue's purpose due to the limitation of space. After rigorous review process this year, six articles are included in this special issue, including four research papers, one scholarly commentary and one research note. The topics covers three different kinds of disadvantage: economy, remote rural areas, and disabilities. Three of four research paper focus on students and one focuses on non-profit organizations. The scholarly

commentary summarized related neuroscience research and the research note compared the quality of intervention research in different countries. The six papers came from multiple disciplines: sociology, education, educational psychology, special education and neuroscience, which construct education for the disadvantaged from diverse dimensions. This special issue aims to make its contribution to enrich the application and the insight into teaching the disadvantaged students theoretically and empirically.

The first article, **Economically Disadvantaged Adolescents' Teacher Support, Peer Support, Family Cohesion and Psychological Capital: Analyzing The Taiwan Database of Children and Youth in Poverty**, was written by Shou-Chun Chiang and Wan-Chen Chen from National Chengchi University. Adopting the Taiwan Database of Children and Youth in Poverty provided by the Taiwan Fund for Children and Families, this paper found the effects of teacher support, peer support, and family cohesion could enhance the psychological capital (PsyCap, which indicated by self-efficacy, hope, optimism, and resilience collectively) status of economically disadvantaged adolescents. Given that, economically disadvantaged adolescents with higher level of PsyCap are more willing to pursue excellence in the future, lead a positive life to twist their original family in impoverished. This study convinced the positive influence of school to psychological capital of students with economic disadvantage, and the female students get more support than male ones. The findings of the study is helpful for the practitioners at school.

The second article, **Creation for Disadvantaged Education: Development and Application of The Organizational Capacity Checklist for The "Taiwanese Turnaround Alliance,"** written by José Chiu-Cheng Chen from Tunghai University and Yi Jou Liu from Taiwanese Turnaround Alliance, exemplifies a collaboration between the academia and the practitioners. This paper is rooted that Chi-Chen foundation found the dilemma of non-profit organizations to provide academic services to students with disadvantage. To improve the efficacy of the NPOs, a mechanism of cooperation was invented to make the best service for the disadvantaged students. Founded in 2015, The Taiwanese Turnaround Alliance has made collaborative tools for carrying out the "coach and partner" strategy for its member organizations, as well as depict the application and limitations of those tools. Through the policy Delphi, group discussion, and AHP questionnaire survey, the Taiwanese Turnaround Alliance created "the checklist for agencies' operation and management" for carrying out the "coach and partner" strategy. The checklist includes six dimensions and 21

subdimensions with respective weights, as well as 80 required or selective question items, which aims to carry out the vision of sharing resources, networks, and experiences among similar non-profit organizations and to fulfill the missions of these institutions.

The third article, **Impact of Outdoor Adventure Activities in The Service-Learning Program on Emotionally Disadvantaged Children in Metropolitan Areas**, was written by Chi-Yang Chung from National Taiwan University of Sport. Different from the previous literature focusing on the disadvantaged due to culturally impoverished location, this author coins a new term called emotionally disadvantaged in metropolitan areas, indicating the group of students lack of introspection due to fast-paced lifestyles, lack of care due to dysfunctional family situations, and emotional insecurities arising from the lack of interpersonal relationships. Through college students to lead high-school students in facilitating experiential learning for metropolitan-based elementary-school students with emotional disadvantages, the author collected data by one-on-one interviews, focus-group interviews, participant observation, and reflection papers to realize the impact on emotionally disadvantaged children in metropolitan areas. The emotionally disadvantaged primary school students linked the new people, activities and outdoor stimulus to their daily experiences, their conscience is awakened through this concrete exploration outdoors. The findings are conducive not only to the methods to assist the emotionally disadvantaged children in metropolitan areas, but also to the reflection of both undergraduates and high school students joining the service-learning program.

The fourth article, **Facilitating Factors on The Completion of High School Degrees by Adolescents in Remote Areas: A Case Study of Graduates from a Remote Junior High School**, was written by Shu-Chun Lin from National Changhua University of Education and Li-Fei Wang from National Taiwan Normal University. This paper discusses the challenges faced by adolescents in remote areas when making their transition from junior high to high school. This group of students are exactly the disadvantaged caused by culturally impoverished location. Five group and one-three interviews to individuals were conducted; 16 adolescents across four classes in a remote area were interviewed. Also, the homeroom teacher in this junior high school was interviewed to learn the students better. The findings reveal the adolescents from remote and rural schools encountered many dilemmas in senior high schools: struggle in academic learning, anxiety in strange environment, stress of unclear career, and economic problems. The core belief

supported this group of adolescents as they completed their senior high and vocational school degrees was the “pursuit of dreams.” During the process, this group of students continuously encouraging themselves or seeking assistance from parents, teachers, and peers, they were able to overcome difficulties. Besides realizing the obstacles occurred for adolescents in other remote areas, this paper provides recommendations for the practitioners to help more adolescents in remote areas self-actualize their dreams.

The fifth article, **The Cognitive Neural Mechanism of Mathematical Learning Disabilities: Insights from Magnetic Resonance Imaging Studies**, written by Ting-Ting Chang and Tzu-Chen Lung from National Chengchi University, is a scholarly commentary which concluded the studies of math learning disabilities from neuroscience research. This paper reviews contemporary studies that have used neuroimaging techniques to explain the characteristics of mathematical learning disability (MLD) and its neural mechanisms. With a focus on the crucial deficits of MLD, including numerous sensitivity, mathematical facts extraction, the correctness or fluency of calculation and the problem of working memory plus negative emotions such as anxiety, which have usually seen in the MLD, the technics of magnetic resonance imaging (MRI) and its application can be used to pointed out the neural mechanism of the problems above. Besides the introduction of neuroimaging techniques of MRI and its application, this paper states the primary neural area related to learning math, which included after the top of the roof of the ditch, angular gyrus, supramarginal gyrus and the bilateral top leaf regarding attention acquired by the process of calculating. The findings of cognitive neuroscience research revealed that the brain structure, neural activation and neural circuits of the students with MLD are different from those of the normal ones and that effective remediation courses not only improve the performance of students with MLD but also enhance their brain structure, neural activation and neural circuits. Given that, the authors suggested that the implementation of local remediation for students with MLD and for those with special needs should be linked with neuroscience evidence to be effectively and timely make up the difficulty in learning math.

The sixth article, **The Quality of Single-Case Research for Individuals with Autism Spectrum Disorders in Japan and Taiwan: An Investigation of Inter-Rater Reliability and Treatment Fidelity**, written by five authors, is a research note. The authors in order are Ee Rea Hong from University of Tsukuba in Japan, Shin-Ping Tsai and Pei-Yu Chen from National Taipei University of Education, Li-yuan Gong from University of Tsukuba and



Jennifer B. Ganz from Texas A&M University-College Station in the U.S. This paper reviews non-English-language journals with multinational cooperation, focusing on seven primary peer-review publications in the field of special education till 2015 in Japan and Taiwan. It aims to evaluate the overall quality of ASD intervention research to establish the reference to the empirical intervention. There are 168 articles published in Japanese journals and 26 published in Taiwan, which were reviewed based on the authors' criteria. The findings show that an overall increasing trend in the number of articles that reported IRR data with acceptable levels were observed over time in the Japanese journals while no such trend was found in the Taiwanese journals. In the contrast, the treatment fidelity data have been reported by Taiwanese journals but none could be found in its counterpart of Japan. Given that, the evaluation of treatment fidelity and its IRR is still at the initial stage in both countries. To improve the overall quality of ASD intervention research, efforts should be made to report both IRR and treatment fidelity data based on the suggested standards with acceptable quality degrees in Asian-language journals.

Adelman, H. S. (1992). LD: The next 25 years. *Journal of Learning Disabilities*, 25, 17-21.

OECD (2005). *Special education needs: Statistics and indicator*. Retrieved in <http://www.oecd.org/edu/innovation-education/specialeducationneeds-statisticsandindicators.htm>

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