國民小學校長重建領導層面及能力指標建構之研究：複合多評準決策的應用

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　　根據 Beddington 等人所主張的心智國富論，學校教育是發展個人心理資本的重要歷程，支持性的教學和教育有助於提升學生的心理資本。然而，低表現、低成就或失敗的學校無法提升學生的心理資本。在臺灣，低表現、低成就或失敗的學校通常有下列特徵：學校內部不和諧、親師衝突持續發生、行政運作失能、學校聲望低落、校舍老舊、社區環境不佳、家長社經背景差異大、辦學成效不彰等。因此，有必要透過校長重建領導，以引導低表現學校，在短期間內，進行大幅度及戲劇性的正向轉型，成為高表現學校。

　　本研究旨在建構國民小學校長重建領導層面及能力指標、影響關係與權重體系，作為校長在接任低表現學校時，領導學校邁向優質學校之參照。本研究採取複合多評準決策（hybrid Multiple Criteria Decision Making）融合驗證性因素分析（confirmatory factor analysis, CFA）、決策實驗室法（Decision Making Trial and Evaluation Laboratory, DEMATEL）、決策實驗室分析基礎之網路層級分析法（DEMATEL-based Analytic Network Process, DANP），其中，臺灣學者 Tseng 所發展 DANP，係基於 Saaty 的 ANP 及 Fontela 與 Gabus 的 DEMATEL，世界各國學者廣泛運用 DANP 於商業、管理、都市計畫、公共政策等領域的研究，然而，教育領導研究的運用較少。複合多評準決策可同時考慮多元目標，幫助決策者評估最好的方案，在真實世界中，指標或層面之間經常

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相互關連，具有特定的反饋效果，傳統方法難以解決複雜和相互交錯的問題，因此，採行複合多評準決策做為研究方法是有必要的。

本研究分為三個階段：在第一階段，依文獻探討研擬各層面及能力指標，邀請 10 位專家檢測專家效度，然後透過分層隨機抽樣，抽取 515 位國小校長進行問卷調查，回收 371 份有效問卷。運用 SPSS、AMOS 軟體，進行項目分析及驗證性因素分析，確認各層面及能力指標；在第二階段，邀請 14 位國小校長及學者專家，進行準則問卷調查，運用 DEMATEL 建立各層面與能力指標之因果結構關係圖（Influential Network Relationship Map, INRM）；在第三階段，運用 DANP 建構各項能力指標之影響關係與權重體系。

本研究發現：(1)國小校長重建領導包含驅動結果、問題解決、個人效能以及影響結果四個層面及 20 項指標，具有信效度，提供領導實踐的完整架構，可做為重建領導研究的評量工具；(2)在驅動結果層面，績效評估為影響因素，前瞻規劃、高度期望、優先順序、持續革新為被影響因素，在此層面，宜將重點優先配置於績效評估；在影響結果層面，專業發展、正向溝通為影響因素，同理關懷、參與激勵、危機領導為被影響因素，在此層面，宜將重點優先配置於專業發展、正向溝通；在問題解決層面，分析診斷、解決策略、知識管理、課程領導為影響因素，校務變革為被影響因素，在此層面，宜將重點配置於分析診斷、解決策略、知識管理、課程領導；在個人效能層面，革新信心、組織承諾、自我管理為影響因素，決斷能力、挫折復原為被影響因素，在此層面，宜將重點配置於革新信心、組織承諾、自我管理；(3)重建領導各層面及指標影響權重相當接近，各層面及指標同等重要，領導實踐必須加以兼顧。

本研究提出以下的建議：(1)重建領導各層面及指標之影響關係及權重，當校長在接任低表現學校時，做為領導學校邁向優質學校之參照，並提供校長進行重建領導之自我檢核，掌握重要的領導主導影響因素，達到顯著的領導效果，並有效提升學生心理資本；(2)教育行政機關可運用重建領導各層面及指標，遴選具備重建領導能力的校長，及做為規劃校長專業發展及培育方案之參考；(3)未來研究可運用重建領導層面及能力指標進行量化或質性探究，以累積重建領導效果的證據，建構更完整

的理論與實踐體系，同時，可繼續運用複合多評準決策，提升校長領導研究之嚴謹性，突破傳統研究方法的限制，並發展適合不同學制的重建領導指標，引導各級學校的重建領導實踐。

關鍵詞：校長領導、重建領導、複合多評準決策

The Construction of Dimensions and Competency Indicators of Elementary School Principals' Turnaround Leadership: A Novel Hybrid MCDM Model

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According to the Mental Wealth of Nations advocated by Beddington et al., school education is an important process to develop personal mental capital, as supportive teaching and education can improve students' mental capital. However, this is not the case for low-performing, low-achieving or failing schools. In Taiwan, low-performing schools are usually characterized by internal disharmony, a continuous conflict between parents and teachers, ineffective administrative operation, low school reputation, old school buildings and facilities, poor community environment, large difference in parents' socioeconomic status, and poor school effectiveness. Therefore, for these schools to become high-performance schools in a short period of time, guiding low-performing schools through principal turnaround leadership is necessary for making such a substantial and positive transformation.

The purpose of this study is to construct the influence relationship and weight system of the dimensions and competency indicators of principal turnaround leadership in elementary schools, which can be used as a reference for new principals to transform low-performing schools into high-quality schools. In this study, hybrid multiple criteria decision making (MCDM) was adopted as a research method in combination with confirmatory factor analysis, Decision Making Trial and Evaluation Laboratory (DEMATEL), and DEMATEL-based Analytic Network Process (DANP). Among them, DANP developed by Tseng, a

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Taiwanese scholar, is based on Analytic Network Process (ANP) proposed by Saaty and DEMATEL proposed by Fontela and Gabus. Scholars from various countries have widely applied DANP in the research of business, management, urban planning, and public policy, but rarely in educational leadership. Hybrid MCDM was adopted because it can simultaneously consider multiple objectives and help decision makers evaluate the best scheme. In the real world, indicators and dimensions are often interrelated and have specific feedback effects; thus, it is difficult to solve complex and intertwined problems with traditional methods.

This study aims to construct the dimensions of elementary school principals' turnaround leadership and competency indicators, the relationships of effects, and the weight system. It includes three stages. During the first stage, the dimensions and indicators of elementary school principals' turnaround leadership were developed based on literature review, and validated by ten experts. Then, stratified random sampling was conducted; 515 elementary school principals were invited to fill out the questionnaire, and among which 371 valid questionnaires were obtained. By using SPSS and AMOS, item analysis and confirmatory factor analysis were conducted. During the second stage, 14 elementary school principals, scholars and experts were invited to fill out the expert questionnaire. By using DEMATEL, Influential Network Relation Map (INRM) of dimensions and indicators were created. During the third stage, by using DANP, the relationships of effects among indicators and a weight system were established.

The findings of this study indicated that: 1) elementary school principal turnaround leadership includes four dimensions with 20 indicators, namely driving results, influencing results, problem-solving and personal effectiveness, The reliability and validity were established. The four dimensions and 20 indicators provide a complete framework for leadership practice and can be used as tools for evaluating the research of turnaround leadership. 2) In the dimension of driving results, performance evaluation is an influencing factor, while indicators, such as prospective planning, high expectation, priority, and continuous innovation, are influenced factors. Hence, in this dimension, priority should be given to

performance evaluation. In the dimension of influencing results, professional development and positive communication are influencing factors, while empathy care, participation motivation, and crisis leadership are influenced factors. As a result, for this dimension, priority should be given to professional development and positive communication. In the dimension of problem-solving, analysis, diagnosis, solution strategy, knowledge management, and curriculum leadership are influencing factors, while school affairs reform is an influenced factor. For this dimension, the focus should be on analyses and diagnoses, solution strategy, knowledge management, and curriculum leadership. In the dimension of personal effectiveness, innovation confidence, organizational commitment, and self-management are influencing factors, while decision-making ability and frustration recovery are influenced factors. For this dimension, the focus should be on innovation confidence, organizational commitment, and self-management. 3) As the influencing weights of the dimensions and indicators of turnaround leadership are quite close, all the dimensions and indicators are equally important, and leadership practice must be taken into account.

This study put forward the following suggestions: 1) The influence relationship and weights of the dimensions and indicators of turnaround leadership can be used as a reference for new principals to lead low-performing schools into becoming high-quality schools. They enable principals to carry out self-examination of turnaround leadership, grasp the important influencing factors of leadership, achieve remarkable leadership effect, and effectively improve students' mental capital. 2) Educational administrative authorities can use the various dimensions and indicators of turnaround leadership to select principals with turnaround leadership abilities and provide a reference for professional development programs for principals. 3) Future research can use the dimensions and competency indicators of turnaround leadership to conduct quantitative or qualitative research, so as to accumulate evidence of turnaround leadership effects and construct a more complete theoretical and practical system. At the same time, the continuous usage of hybrid MCDM can improve the rigor of principal

leadership research, break through the limitations of traditional research methods and develop a competency indicators of turnaround leadership suitable for different school systems to guide practices of turnaround leadership for schools at all levels.

Keywords: *hybrid MCDM, principal leadership, turnaround leadership*