

壹、解釋名詞(說明涵義外亦請舉例)(每題 5 分，計 35 分)

1. 假設檢定的 Power；2. 準實驗設計；3. 常模與效標參照；4. 系統抽樣；5. 地板與天花板效應；6. 內在與外在效度；7. 調節與中介效果

貳、問答與計算題

一、閱讀以下文章，然後使用中文回答問題，不可用英文回答〈21分〉

The relationship lying between critical thinking and creative thinking is opposite or complementary, results of previous relevant researches have not yet concluded. However, most of researches put the effort to compare the respective effect of the thinking methods, either the teaching of creative thinking or that of critical thinking. Less of them showed the interest to investigate the combined effect of these two thinking skills teaching, especially its synergy. Therefore, present study aimed to discuss the synergy of critical thinking and creative thinking, and investigated the joined effect of these two methods of thinking in the courses of 'Integrated Activity courses'. Not only the separate influence but also the synergy would be our interests. Moreover, the outcome would also be compared with the learning result of single creative thinking skill teaching. Participants were 147 male students and 118 female students of ninth grade from 8 intact classes in a public middle school in Taiwan, the number of total participants were 265. Experimental design was 'nonequivalent control group pretest/ post-test quasi-experimental design'. Participants were assigned into three groups, three intact classes for creative thinking teaching group (EG1), three intact classes for 'critical thinking and creative thinking combined teaching group (EG2)' and two intact classes for regular teaching method group (watching video, control group). All participants took the assessment 'The New Creative-Thinking Testing' and 'The Critical-Thinking Testing, Level 1' after receiving the courses as post-test. Data were analysed statistically by one-way ANCOVA. The results showed that: (1) Regards to the performance in Integrated Activity courses, no significant difference was found among students in EG1 and those in EG2. However, the students in both experimental groups got higher scores than those in control group did. (2) As for the ability of critical thinking, students in EG2 got higher score than those in EG1 and CG did, but no difference was found among the students in EG1 and those in CG. (3) In respect of originality, students in EG2 got higher score than those in EG1 did, the influence of critical thinking was significant. Theoretical and possible applications of the results were also discussed. Present study not only manifests

the correlation between creative thinking and critical thinking, but also provides the empirical data for synergy in actual pedagogical situations.

- 1.本研究指出過去的研究限制為何? 2 分
- 2.本研究的主要目的為何? 3 分
- 3.本研究參與者特性為何? 2 分
- 4.本研究之實驗設計為何? 3 分
- 5.本研究的工具有那些? 3 分
- 6.本研究之統計方法為何? 3 分
- 7.本研究之結果如何? 2 分
- 8.本研究的題目你會如何制訂? 3 分

二、實驗的結果若想要能獲得正確的解釋，必須控制一些影響實驗結果的無關變項。一般而言，其控制的方法有那些?(9分)

三、依據 Stevens (1951) 的區分方法，其認為變數可區分為那些，並請舉例說明?(12分)

四、有一研究者想探究正念團體對降低壓力的效果，她使用了實驗法來檢驗效果。以下為實驗處理後的壓力測量結果。(23分)

正念組：10、12、12、12、10、15、10、6、12

控制組：6、5、7、8、9、5、3、3、6

- 1.本研究適合什麼實驗設計方法? 3 分
- 2.本研究之自變項、依變項為何? 2 分
- 3.本研究之假設為何? 3 分
- 4.請使用適切的統計方法來檢驗資料是否支持假設。請用以下臨界值來判定。 $t(1, 16) = 2.58$ (此為臨界值) 12 分
- 5.請你制定本研究的題目? 3 分