

國立臺灣師範大學 109 學年度碩士班招生考試試題

科目：教育心理學

適用系所組：教育心理與輔導學系/教育心理學組

注意：1.本試題共3頁，請依序在答案卷上作答，並標明題號，不必抄題。2.答案必須寫在指定作答區內，否則依規定扣分。

- 一、何謂記憶的干擾理論 (interference theory) 與衰退理論 (decay theory) (10 分)? 它們分別對於教學設計與學習輔導有何啟示(10 分)?
- 二、作弊(cheating)似乎永遠是各國校園會發生的問題。古今中外只要有考試/比賽，就免不了有人作弊，甚至集體作弊。請從動機理論與認知發展/道德發展理論，探討青少年作弊行為的成因(10 分)，以及輔導策略(10 分)。
- 三、試述那些族群差異與文化特殊性的相關理論內容或實徵研究結果，提供你重要的新思考來協助處於多元文化脈絡的學生步上正向適應之途?(10 分)
- 四、請閱讀以下的期刊論文內容，回答下列各子題。
 - (一) 請用 3~5 行文字摘要以下論文內容。(10 分)
 - (二) 根據內文，你認為教育心理學未來在學習結果與歷程的評量上可以如何應用?請以教育心理學的主題(可以是學習、教學、行為等)，設計一個實驗驗證你的想法。請為你的研究下一個標題，並寫出研究問題、研究假設(需有理論或實徵研究依據)、研究變項、實驗設計、評量工具(請從內文中提到的評量工具來寫)、統計分析方法。(20 分)

Educational Psychology's Past and Future Contributions to the Science of Assessment

Educational psychology contributed to the science of assessment by developing techniques for assessing (a) types of knowledge and skills (i.e., learning outcomes) and (b) types of cognitive processing during learning (i.e., learning processes).

First, cognitive testing has been a core component of educational psychology from its inception, epitomized by Thorndike's work on measurement of individual differences, which included developing standardized tests of school achievement in subjects such as reading, arithmetic, and handwriting; developing a standardized college admission test; being part of a team that developed the first large-scale selection tests for the U.S. Army in World War I; and being part of a team that professionalized psychological testing by founding the Psychological Corporation in 1921 (Mayer, 2003). Thorndike (1918, p. 16) set the tone for psychological testing with his famous quote: "Whatever exists at all exists in some amount." When it comes to cognitive testing, educational psychologists such as Thorndike (Mayer, 2003) and Binet (Wolf, 1973) offered a shift from viewing intellectual ability as a mental factor—which was the dominant view the first half of the 20th century—to viewing intellectual ability as based on knowledge acquisition. Bloom's taxonomy (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956) represents an important step in building a taxonomy of the kinds of learning outcomes that could be subjected to targeted testing. Today, there is growing consensus that cognitive performance depends on what

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the learner knows, so the focus of cognitive assessment should be on determining the learner's existing knowledge, skills, and beliefs (Anderson et al., 2001; Pellegrino, Chudowsky, & Glaser, 2001). An important contribution of educational psychology has been on analyzing and measuring types of knowledge, such as factual, conceptual, procedural, and metacognitive knowledge (Anderson et al., 2001) or facts, concepts, procedures, strategies, and beliefs (Mayer, 2011).

In the future, instead of high-stakes summative testing conducted outside the learning environment that dominates educational assessment today, educational psychologists should lead the shift to low-stakes formative assessment that is embedded within the natural course of learning. The goal is to provide a continuous and unobtrusive monitoring of learning so that both students and teachers can see individual growth in knowledge, which Hattie (2009) refers to as *visible learning*. Computer-based technology is likely to play a useful role in helping monitor each student's growth in knowledge, analogous to the use of self-monitoring devices in fitness that provide a continuous reading of miles walked, steps climbed, heart rate, and the like. Real-time monitoring of each learner's knowledge, motivation, affect, and metacognition can also help instructors adapt their instruction, so a focus on building feedback that leads to more effective adaptive instruction is an important related goal for the future. For example, Shute and Ventura (2013) have shown how learning assessments can be embedded within computer games to create *stealth assessment*; that is, assessments that appear to be part of computer-based activities to learners.

Second, educational psychology has been at the forefront of assessing cognitive processing during learning using a variety of techniques ranging from self-report surveys to thinking aloud protocols to data mining of button presses in online learning to physiological measures. At a gross level, such processes can be characterized as selecting (i.e., attending to relevant incoming information), organizing (i.e., constructing coherent structures), and integrating (i.e., connecting incoming information with relevant prior knowledge; Mayer, 2009, 2011). At a more domainspecific level, each kind of academic task can be analyzed into subprocesses such as recognizing phonemes, decoding words, developing fluency, and accessing word meaning in reading; using prior knowledge, using prose structure, making inferences, and comprehension monitoring in reading comprehension; planning, translating, and reviewing in writing; or problem translation, problem integration, solution planning, solution monitoring, and solution execution in mathematical problem solving (Mayer, 2008). In short, an important contribution of educational psychology has involved assessing the learner's cognitive processing during learning.

In the future, physiological measures, particularly measures of brain activity such as fMRI and EEG, may prove helpful in supplementing self-reports of cognitive activity during learning. Similarly, another way to supplement self-report measures of cognitive activity during learning involves computer-based technologies that can record relevant activities during learning (such as button presses, pen strokes, or eye movements). Refinement of online measures of affect during learning represents another important future direction for assessment in the future.

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五、請閱讀以下短文並回答下列 3 個子題。

(一)你認為本實驗提供「在五歲的時候你在全家最常去的大賣場走失」、「當時你哭得很大聲」、「最後是一位老先生注意到並帶你回爸媽身邊」等這些提示詞給受試者填寫細節的作用是甚麼？(5分)

(二)你認為這項實驗的操弄過程哪個部分可以如何修改，可能會提高實驗結果中假記憶的人數比例？(5分)

(三)請將文末「虛假記憶又是如何產生的呢？」完成可能的解釋。請以記憶理論的內容來支持你提出的解釋。(10分)

人有時在回想過去某個經驗時，卻發現跟家人講的內容不太一樣，好像那件事情並不是自己所記得的樣子，那種模模糊糊的感覺真讓人好不踏實。美國心理學家羅芙托斯 (Elizabeth Loftus) 就是專門在研究那些人們所記得但卻與事實不符的「假記憶」，簡單來說就是那些自己記得但實際上卻不存在的過去事件。

羅芙托斯博士有個非常有名的「在大賣場走失」的記憶實驗：透過語言暗示以及要求人們盡量寫下沒發生過的事件細節，便能輕易地讓人信以為真，以為自己曾經在大賣場走失過。詳細的操弄過程如下：

羅芙托斯博士邀請了 24 位個人來參與實驗，她先去向他們的家人們詢問小時候所發生的事情，譬如說常去的大賣場是哪一個、曾經旅遊過的國家等等，為的就是讓當事者更加確信這些事情都是真的。接著博士給予參與者一本筆記本，裡頭記載著小時候發生的四件事，並要求參與者在接下來的五天之中，盡量回憶出這四件兒時經驗的細節，如果真的不記得就寫下「我不記得」。這四件中有包含了三件是參與者 4~6 歲期間真實發生過的事，但另外一件卻是未曾發生過的事，是在訴說著 5 歲時於大賣場走失的經驗。在這四項事件後面都會附上一大段空格以及幾句提示，像是在大賣場走失經驗中，就會給予「在五歲的時候你在全家最常去的大賣場走失」、「當時你哭得很大聲」、「最後是一位老先生注意到並帶你回爸媽身邊」，讓參與者可以利用這些提示詞來填寫細節。

大家都會覺得對於沒發生過的事情應該會直接說他不記得了，但實際上在 24 位參與者中竟然有 7 位民眾對於第四件根本沒發生過的事（在大賣場走失）做出回憶，也就是說他們 7 位產生了假的記憶，甚至在實驗結束後的訪談中告訴他們其實在大賣場走失經驗是假的記憶，是實驗需求特地編造出來的，他們還是不敢相信那是假的，一直覺得那是自己真實發生過的事。

虛假記憶是如何產生的呢？

節錄自蔡宇哲、洪群甯 (2015)《神奇的心理學》