

國立台中教育大學九十八學年度研究所碩士班招生考試

專業英文試題

適用學系：教育學系、課程與教學研究所

一、選擇題：請閱讀下列短文，並回答文後所列問題。(每題二分，26%)

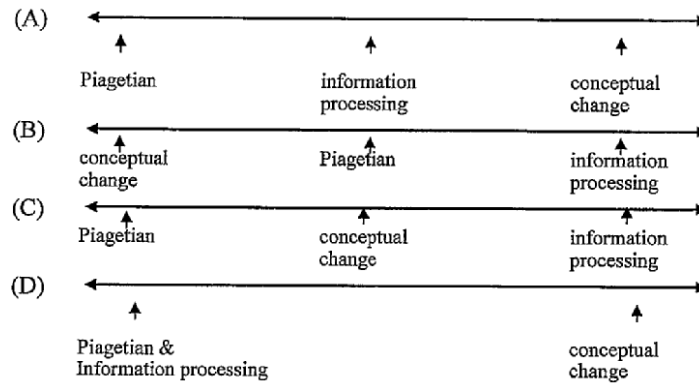
I

One of the main tasks of schools today consists of preparing students for lifelong learning. That means, first of all, enabling students to learn and think independently and efficiently. It is well known that learning tasks and demands in science education present substantial difficulties for the majority of students. International comparisons (e.g., by the Third International Mathematics and Science Study [TIMSS] and the Programme for International Student Assessment [PISA]) have shown large problems concerning application tasks, problem solving, and scientific argumentation, whereas reproductive tasks and skills were better mastered. Science education suffers – among other shortcomings – from the dominant orientation toward isolated, nonsituated facts, which are seldom applied to real-life situations. This approach leads to difficulties in understanding and a loss of sense and motivation in many students.

In this context, many important questions arise, among others: What can teachers do to maximize the effective construction of adequate science knowledge by students? How can teachers maximize the opportunities for students to construct new schemata, new ways of thinking about the world? The problem and the questions are not new. And there exist different approaches and answers. The present predominant “theory-oriented programs” that focus on cognition are either Piagetian in nature or based on some form of an information processing model of cognition. The “theory of conceptual change” lies between these two.

1. 本文主要是討論學生在哪個學習領域的表現？
(A) 閱讀 (B) 寫作 (C) 數學 (D) 科學
2. 根據 TIMSS 及 PISA 等的研究發現，下列何者正確？
(A) 學生們在課程內容精熟方面表現較佳
(B) 學生在論證方面的表現優於知識的應用
(C) 學生們的問題解決表現優於論證
(D) 學生們在知識創新方面表現較佳
3. 根據本文，下列何者是當前學校教育的主要任務？
(A) 發展學生的領域專門知識
(B) 培養學生良好的學習態度
(C) 培養學生獨立思考能力
(D) 提供學生發現學習的機會

4. 文中「construct」的這個字（畫底線部份）和下列哪一個的意義最接近？
 (A) assemble (B) build (C) convey (D) transmit
5. 文中所謂的「reproductive tasks」最接近下列哪一種認知活動？
 (A) remember (B) understand (C) apply (D) create
6. 根據本文的內容，下列何者最能說明學生在所述領域的學習特質？
 (A) rote learners
 (B) self-regulated learners
 (C) motivated learners
 (D) inquiry-oriented learners
7. 根據本文所述的教學取向，下列何者最能表達相互間的關係？



II

Previous cross-national studies have surveyed the educational and occupational status of the parents, parental help, the study environment at home, time spent on homework, parents' expectations of their children, and parents' beliefs about their children's future happiness and the way to achieve success. The educational and occupational status of the parents and the study environment at home were not found to contribute to performance differences in mathematics. However, time spent on homework, parental help, parents' expectations of their children, and parents' beliefs about their children's future happiness and the way to achieve success do seem to be related to children's school work.

Compared to US students, Chinese students not only have longer school year, but also spend more time on homework in all subjects. As far as the time spent particularly on mathematics homework is concerned, data from the second International Assessment of Educational Progress (IAEP) showed that students from Mainland China and Taiwan spent more hours on mathematics homework each week than did US students (Lapointe et al., 1992). In particular, 72% of the students from Mainland China reported that they spent two hours or more on mathematics homework each week, but only 37% of the US students reported doing so. In addition, not only did Chinese students spend longer time on

homework, but also the majority of them attended cram schools according to a survey of teachers in Taiwan. The time spent on homework is one kind of measures for students' learning in home setting. It is quite possible that for doing the same number and types of homework problems, one group of students may take much longer than the other. Future studies should focus on actually documenting the kinds of homework Chinese students have and the kinds of mathematics-related cram schools they attend. Studies are also needed to investigate the actual impact of the homework and cram schools on students' learning of mathematics.

8. 根據本文之內容，下列哪個因素和學生的數學成就有顯著的相關？
(A) 家長職業 (B) 家長教育程度
(C) 家庭學習環境 (D) 家長對子女的期望
9. 根據文中所述的研究發現，下列敘述何者正確？
(A) 學生花在數學作業的時間和其數學成就有顯著的相關
(B) 大陸和台灣學生每週花在數學家庭作業上的時間有顯著差異
(C) 大陸學生花在數學家庭作業的時間大約是美國學生的兩倍
(D) 大部分的美國學生每週花在數學作業的時間不到二小時
10. 下列哪一方面的研究不符合本文作者的建議？
(A) 學生數學家庭作業內容的分析 (B) 學生數學作業份量的比較研究
(C) 家庭作業對學生數學學習的影響 (D) 補習班對學生數學學習的影響
11. 下列何者可以由本文的內容得知？
(A) 中國大陸學生全年的上課日數多於美國
(B) 中國大陸學生全年的上課日數多於台灣
(C) 台灣學生參加課後補習的學生比率多於中國大陸
(D) 台灣學生參加課後補習的學生比率和中國大陸沒有差別
12. 根據本文中所引述 Lapointe 等人之研究發現，下列敘述何者正確？
(A) 中國大陸和美國學生每週花在數學作業的時間顯著高於其他領域
(B) 中國大陸學生每週花在數學作業的時間顯著高於台灣學生
(C) 美國、中國大陸、台灣的學生每週花在數學作業的時間並沒有顯著差異
(D) 美國學生每週花在數學作業的時間顯著低於台灣學生
13. 下列哪一個最適合作為本文的子標題？
(A) 數學家庭作業的重要性 (B) 家庭作業與數學成就的關係
(C) 家庭因素和數學學習的關係 (D) 課外補習與數學學習的關係

二、填空：每格三分 (24%)

請根據文意，從所列的清單中選擇各標號處的最適當字詞。

(注意：回答時請註明標號並寫出所選的字詞)

Curriculum planning, including decisions about what to teach and to what purpose, occurs at different levels of remoteness from intended learners. John Goodlad classifies

three levels of curriculum planning. At the (1) level, participants include boards of education, state departments of education, federal agencies, publishers, and national blue ribbon curriculum reform committees. At the (2) level, administrators, and faculty groups are the prominent actors. Parents and students, too, are playing an increasing role in decision making with respect to curriculum. The (3) level refers to decisions made primarily by a teacher or teams of teachers guiding specific groups of learners.

Consequently, different proponents at levels have proposed different curriculum operations. The (4) curriculum might represent perspectives or desired directions in curriculum from different groups, such as governments, foundations, and special interest groups. The impact of such a curriculum depends on whether their recommendations are adopted and implemented. The (5) curriculum are proposed by state and local boards. It is decided by the states and local boards about what shall be taught and to what ends. Teachers interpret the curriculum proposed by the state and local school boards in many ways. However, there always has been a great gap between adopted curriculum and the teachers' perception of curriculum. Therefore, the (6) curriculum represents teachers' belief in what the curriculum means or should mean in practice.

The (7) curriculum refers to what actually goes on within the classroom. There have been discrepancies between what teachers say the curriculum is and what teachers actually do. And, the (8) curriculum reveals the personal experiences obtained by students from their classroom.

behavior	progressivism	ideal	reconceptualists	formal
humanistic	reconstructionism	operational	societal	instructional
real	written	oral	experienced	modern
institutional	perceived	behavioral	existentialism	school
basic	modern	contemporary	equality	excellence

三、簡答題：請閱讀下列短文並以中文回答下列問題。(25%)

A number of curriculum and textbook analyses conducted in this area have consistently found that Chinese curricula placed more emphasis on applying basic knowledge and routine procedures, on abstract reasoning, and on solving non-contextualized and conventional problems, but less on investigation, on intuitive thinking and visual representation, and on solving contextualized and non-traditional tasks (Bao, 2002; Fan, 1999; Y. Li, 1999; Zhu, 2003). In solving traditional types of tasks, the Chinese curricula provide more challenge for learners (Zhu, 2003). In addition, Chinese mathematics curricula offer a relatively narrow scope of content, but the coverage is often deeper. A larger percentage of content is repeated in US curricula than in Chinese curricula. Flanders (1987) examined the percentage of new content introduced at each grade level (K-8) in three US mathematics textbook series. He reported that the average

percentage of new content in the three series ranged from about 40% to 65% at each grade level and much of the new content is introduced at the end of the year. Using the Flanders' coding method, however, Cai (1995) reported that over 95% of the content is new at each grade level (grades 1-6) in the Chinese textbook series published by the People's Education Press and the old content is primarily found in the review section at the end of each textbook.

The curricula in China are usually designed to support individual learning, but not for cooperative learning. For example, Zhu (2003) examined two seventh and eighth grade mathematics textbooks widely used in China and revealed that almost all problems provided in the textbooks are those that support individual learning, whereas many problems in the US books are designed for group work, which supports cooperative learning. Less opportunity is provided in the Chinese textbooks for students to write and present their ideas.

- 1、本文的內容主要和哪一個學習領域有關？主要討論此領域中哪一方面的議題？
- 2、根據本文之引述，Flanders (1987) 的研究有何主要發現？
- 3、根據本文之引述，Cai (1995) 的研究有何主要發現？
- 4、本文所述的內容中，中國和美國的主要差異有哪些？
- 5、請幫本文下一個最能反應其內容的標題。

四、翻譯：請依序將畫底線之字句翻譯成中文。(25%)

Many students, especially those who are poor, intuitively know what the schools do for them. They school them to confuse process and substance. Once these become blurred, a new logic is assumed: the more treatment there is, the better are the results; or, escalation leads to success. The pupil is thereby 'schooled' to confuse teaching with learning, grade advancement with education, a diploma with competence, and fluency with the ability to say something new. His imagination is "schooled" to accept service in place of value. Medical treatment is mistaken for health care, social work for the improvement of community life, police protection for safety, military performance of the institutions which claim to serve these ends, and their improvement is made to depend on allocating more resources to the management of hospitals, schools, and other agencies in question.

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課程與教學理論與實務試題

適用學系：課程與教學研究所

- 一、請釐清「課程發展」、「課程計畫」、「課程設計」三個名詞的意義以示其間之關係，並以學校本位課程為例，以此三個用語表達從無到具備課程成品之間的工作。(25%)
- 二、請舉述有哪些因素影響到教師知覺課程與實施課程。(25%)
- 三、學者 J. Wiles 和 J. Bondi 認為課程發展最基本的工作在「建立課程哲學」，而後才是「形成目標」。請說明「課程哲學」的意涵，與其在課程發展過程中的功能。(25%)
- 四、「教學理論」內涵為何？又「教學研究」的趨勢為何？試申論之。(25%)

國立台中教育大學九十八學年度研究所碩士班招生考試

教育學（含教育研究法）試題

適用學系：課程與教學研究所

- 一、教育機會均等的涵意為何？並申論從過去到現在的教育發展過程中，教育機會均等的內涵有何演變？(25%)
- 二、2003 年末，天下雜誌以「品格」為主軸出版教育特刊，標題為「品格決勝負—未來人才的秘密」。在這之後，品格議題引起諸多迴響，也成為教育界的熱門話題，進而帶動教育行政部門在〈教育發展會議〉中針對德育進行檢討，並推出品德教育相關政策。請問，何謂品格？就實務狀況而言，孩子們的品格問題主要的癥結點何在？另也請由學理的角度切入，論述學校該如何努力才能有成效？(25%)
- 三、請分別說明皮亞傑(Jean Piaget)與維果茨基(Lev Vygotsky)的認知發展理論的內涵，並比較其差異。(25%)
- 四、調查研究法或實驗研究法中所使用的研究工具，如果是心理量表或問卷，一般皆須進行信效度的考驗。請說明信度及效度考驗的程序及其考驗的統計分析方法。(25%)