

# 國立嘉義大學九十四學年度

## 教育科技研究所碩士班招生考試試題

### 科目：資訊教育概論

- 一、無線通訊目前的發展如何？在學習上的應用又有那些？如果你是一位 e-learning 課程的設計者，你會將國中小學那一方面的課程用無線通訊載具來學習？學生將如何學習？請將設計的內容與活動詳細說明。(25%)
- 二、請你針對某些縣市推動「教師資訊護照」的策略進行評析。此外，請說明增加教師資訊融入教學比率的方法有那些？然後針對自己所列的方法進行優缺點的評析。(25%)
- 三、請在閱讀文章後回答後面所列的問題 ( 50% )

Women and minorities are underrepresented in technology-related careers. Lack of access, level of math and science achievement, and emotional and social attitudes about computer capabilities may be some of the factors that cause women and minorities to avoid high-tech careers. According to the American Association of University Women, the number of women graduating in computer sciences and information technology is decreasing despite the increased need for workers in these areas (Friedman 2000). Following are some steps educators can take to improve their methods for preparing women and minorities for high-tech employment.

#### 1. Change Teaching and Learning Practices

Collaborative and cooperative learning environments are effective teaching strategies for technology learning because they promote learning through social interaction with others. They reflect the constructivist learning theory, which contends that true learning occurs as individuals share their knowledge and interact with each other in the social environment of its application. Collaborative learning practices encourage interdependence and a sense of shared responsibility, as opposed to individual learning, which rewards leadership through dominance.

#### 2. Introduce Technology in Middle Grades

Educators are recognizing the importance of involving girls and minorities in technologies at an early age, when they are motivated by their own interests and not

influenced by stereotypical views of career choices. As at higher levels of schooling, the programs at the middle grades should be engaging and interactive. They should be designed to promote creativity, yet provide structure so that students can relate information technology to their lives (Alter and Severin 2000).

#### 3. Provide Mentors and Role Models

Providing role models and mentors for female and minority students is another way to increase their interest in technology careers. In a study of 12 women successfully employed in nontraditional, technology-related professions, many participants commented that exposure to a strong female technological role model played a significant part in their choosing MST career paths.

- (1) Women and minorities 就職於高科技業的比率偏低，其影響的因素為何？
- (2) 為何讓 girls and minorities 及早接觸到科技會有助於他們日後就職於高科技業？
- (3) 以我國的原住民為例，請舉例說明 Provide Mentors and Role Models 的實際進行方式。
- (4) 文中所提的三種應採取的教育改進措施中，在國內的教育現況中，你覺得那一項最應加強？