

國立臺北教育大學 102 學年度博士班招生入學考試

自然科學教育學系博士班 科學教育專業英文 科試題

一、文意選填及中文簡譯：(共 25 分)

(一)文意選填：(每小題 2 分，共 20 分) 請依文意在文章後所提供的(A)到(J)選項中分別選出最適當者。

(二)中文簡譯：(共 5 分)

In a world filled with the products of 1 inquiry, scientific 2 has become a necessity for 3. Everyone needs to use scientific information to make 4 that arise every day. Everyone needs to be able to engage 5 in public 6 and debate about important 7 that involve science and 8. And everyone deserves to share in excitement and personal 9 that can come from 10 and learning about the natural world.

(A) issues (B) intelligently (C) choices (D) technology (E) scientific
(F) fulfillment (G) understanding (H) literacy (I) everyone (J) discourse

二、Translate exactly in Chinese and interpret critically in Chinese or English the following paragraphs：(25 分)

An attitude is a predisposition to respond in a favourable or unfavourable manner with respect to a given attitude object. A problem that has been raised by those studying attitudes towards science is the theoretical background of attitude itself. In psychological research, attitudes have been studied for a long time, but there still is no agreement on the exact definition of the concept. Attitudes are not directly observable; their existence can only be inferred from observable responses. Few science education researchers have developed theoretical models relating to the various components of attitude.

Some background characteristics of students can be important factors influencing attitudes towards the different aspects of science. Schibeci (1984)

reported in a review of science education literature that of all variables that may influence attitudes toward science, gender has generally been shown to have a consistent influence. It appears that female students have more negative attitudes towards science than male students. Furthermore, it is known that female students have more negative images of scientists than male students. Student age is also important: children at the primary level have rather positive attitudes towards science, whereas attitude scores decline during the secondary school period. This decline is more pronounced for female students than for male students.

三、Translate exactly in Chinese and interpret critically in Chinese or English the following paragraph : (25 分)

Climate change has become one of the major environmental concerns for many citizens. Studies about students' perceptions of global warming and climate change can be divided in four themes: conceptions, causes, environmental impact and resolutions of global warming and climate change. Resolutions in particular relates closely to the private-sphere environmentalism. Again age is an important predictor for this behaviour. In a European survey it appeared that young respondents tend to show a higher level of sensitivity to environmental issues than older respondents. Almost three-quarters of the respondents perceived climate change as a very serious problem. Further, it is known that female students show more concern for the environment than male students. In a study performed by Tosunoglu (1993) to determine the predictors of Turkish university students' environmentally responsible behaviours, female students seemed to be more willing to become actively involved in environmental protection.

四、英文作文(根據下面兩個問題以英文寫出約五百字的看法) (25 分)

(一) Why don't students learn what we are trying to teach them?

(二) Why does the achievement gap persist?