At a time when other careers offer higher salaries, clearer pathways for career development, greater social prestige, and more agreeable working conditions (Organization for Economic Cooperation, 2005 and Ramsay, 2000), teaching would seem to be less attractive as a career than it was 30 years ago when large numbers of what is now often referred to as the “baby boomer” generation were drawn into teaching. With increasing shortages of teachers there has been renewed interest in the U.K., the United States, Europe, Australia, and Asia in understanding what motivates people to choose teaching as a career and what motivates them to persist, particularly since the actual work experience of teachers has become more complex and demanding (OECD, 2005). Over the last five decades there has been a steady flow of studies and reports from many countries, with some of the earliest investigations occurring in Britain during the Great Depression (Valentine, 1934) and at the close of the Second World War (Tudhope, 1944), when teachers were in desperately short supply. By far the largest number of studies of teacher motivations has been conducted in the United States, mostly founded on surveys, with some studies incorporating a qualitative component, resulting in the identification of motivations variously categorised as intrinsic, extrinsic, and altruistic. A review of this body of research conducted up until the early 1990s suggested that “altruistic, service-oriented goals and other intrinsic motivations are the source of the primary reasons entering teacher candidates report for why they chose teaching as a career” (Brookhart & Freeman, 1992, p. 46).

As might be anticipated, teacher candidates report that a desire to work with children and adolescents is highly influential in attracting people into a teaching career (Alexander et al., 1994, Joseph and Green, 1986, Kyriacou and Coulthard, 2000, Moran et al., 2001, Richardson and Watt, 2006, Tudhope, 1944 and Valentine, 1934). Equally, a report of studies conducted with practising teachers from France, Australia, Belgium (French Community), Canada (Québec), the Netherlands, the Slovak Republic, and the U.K. confirmed that the most frequently nominated reasons for career choice among teachers was a desire to work with children and adolescents, together with the potential for the job to provide for intellectual fulfilment, and a means by which to make a social contribution (OECD, 2005). On the other hand, studies conducted in very different sociocultural contexts such as in Brunei (Yong, 1995), Zimbabwe (Chivore, 1988), Cameroon (Abangma, 1981), and Jamaica (Bastick, 1999), have found that more extrinsic motivations such as salary, job security, and career status are important motivations for choosing a career in teaching. It seems clear that different sociocultural contexts potentially frame and shape motivations for career choice, satisfaction and persistence. Researchers who have examined the phenomenon of the career switcher into teaching in various countries have suggested that the rewards of salary and career
prestige are not a high priority for this group who decide later on a career change (Crow et al., 1990, Mayotte, 2003, Priyadharshini and Robinson-Pant, 2003 and Richardson and Watt, 2005). In societies in which career success is measured by salary, career prestige, and social status, the decision to switch to a job that provides for personal satisfaction, the rewards of making a social contribution, and a desire to keep learning, is often seen as an “implausible choice” (Crow et al., 1990, p. 197).

Negative representations of teachers' work in the mass media, changes in political ideology, and shifts in public opinion all impact on the popularity and reputation of teaching as a career choice. Although in surveys across different countries teachers are valued by parents and the community more generally, Australia, the United States, the U.K., and many European countries are increasingly experiencing difficulties recruiting and retaining teachers in the profession (OECD, 2005). Salaries, employment conditions and the social status of teachers (Department of Education, 2003 and Ramsay, 2000) make teaching a less than attractive career option for potential applicants (Kyriacou and Coulthard, 2000 and Ramsay, 2000). For those already teaching, the demands and rewards are not necessarily sufficient to sustain them in the profession, and a mismatch between initial expectations vs. rewards and demands may lead to early attrition. Evidence from the U.K. indicates that 40% of those who enter teaching are no longer there after five years (Kyriacou and Kunc, 2006 and Purcell et al., 2005); and in the United States, it is claimed that up to 40% of new teachers in some school districts resign during their first two years (Weiss, 1999). Other calculations from these countries predict that one in five teachers will leave the profession within three years of entry (Henke et al., 2000, Johnson and Birkeland, 2003 and Office for Standards in Education, 2001). Although there is a lack of reliable empirical evidence from Australia, of all the teachers who participated in the Third International Mathematics and Science Study (TIMSS; Lokan, Ford, & Greenwood, 1996), the highest proportion of teachers indicating that they would “prefer to change to another career” (p. 197) was from Australia and New Zealand.


二、請閱讀下文後，用自己的話語，摘要文中主要觀點（請勿逐字翻譯）。然後，評述作者的觀點。(25 分)

Curriculum and its attendant processes can, therefore, be conceived of as networking activity. It is a network or ecology of learning environments (Heath, 2000, as cited in Perillo & Mulcahy, in press). Curriculum is not seen as a top-down, linear process, but rather it is a network. A network is not a stable social entity, but rather it is “performed in multiple locations in multiple ways. It is an effect of the practices that give rise to it” (Perillo & Mulcahy, in press). What is important about ANT here is that it moves away from a view of curriculum “as an externally controlled object for use in education to how knowledge is created by actors acting in “real-time” to produce everyday enactments of curriculum practice” (Perillo & Mulcahy, in press). In doing so, production models of curriculum that posit curriculum development and practice as separate activities, and curriculum diffusion models that focus on the ways in which the formal curriculum is “diffused” through a range of linear and hierarchical levels (the school, subject department, teacher, classroom), are no longer seen as relevant theoretical frames for examining curricular work. From an ANT perspective
our focus should instead be on making visible and attending to the translating practices (the negotiation, struggle, compromise) that constitute curriculum and the forms of power these practices reflect.

Curriculum is therefore a relational set of practices that is not static but fluid. It is simultaneously a set of practices that is performed by both human and non-human actors, and by the effects of a performance “no matter how stable this effect actually may appear at any one point in time” (Gherardi & Nicolini, 2005, p. 287). Teachers as actors therefore perform curriculum, and their performances are guided by their experience of and contribution to networking activity. As I see it, an important distinction exists between conceptions of the teacher as “curriculum performer” and “curriculum maker.” Craig and Ross refer to teachers as curriculum makers to emphasize the agency of teachers in curricular processes. Re-framing teachers as curriculum performers extends this conceptualisation as it (1) acknowledges the agency of human and non-human actors that influence the ways in which teachers perform curriculum; (2) allows for a more temporally inclusive examination of curriculum (the enactment of curriculum involves multiple rehearsals and performances over time); and (3) highlights the importance of audience—the ways in which teachers perform curriculum can be contextualised more clearly in view of varied audiences (colleagues, educational leaders, and students for example). ANT therefore allows researchers to examine the translation processes through which teachers perform curriculum. I believe that this builds on the work of Schwabian research as it promotes explicit focus on how teacher agency is constituted and enacted in curricula processes. This is because ANT allows researchers to more clearly examine how Schwab’s curriculum commonplaces interact and are translated into practice.

Understanding teachers as “curriculum performers” therefore enhances a focus on both the control and agency teachers utilise in curriculum processes. This is because ANT acknowledges that the effects of agency depend on the pattern of social interactions and translating practices within the networks to which they are associated. Importantly, ANT is interested in ways in which both agency and knowledge are constituted. Knowledge, it is assumed, “is a product or an effect of a network of heterogeneous materials” (Law, 1992, p. 2); it “is not something present in the heads of people or contained within a particular institution or curriculum document, but a process constructed by practising in a context of interactions between human and non-human actors” (Corradi, Gherardi, & Verzelloni, 2008, p.8). ANT is concerned therefore, with knowledge-building activity, “with how knowledge comes to be produced and takes materiality to be ‘tangible knowledge’” (Gherardi, 2006, as cited in Perillo & Mulcahy, in press). Applied to curriculum studies, ANT allows insight into how knowledge is constructed through practice and into how teachers and teacher educators (as is the focus of the review chapters) engage in knowledge building activity, why, when, where, and to what effect.

ANT is an alternate theory through which issues of agency and control as they relate to curriculum, can be more clearly and deeply explicated. ANT conceptualises curriculum “as a field of practices constituted and enacted by people and tools in complex ecologies or networks” (Perillo & Mulcahy, in press).

三、請閱讀下文後，用自己的話語，摘要文中主要觀點(請勿逐字翻譯)，然後，評述作者的觀點。(25 分)

In the late 20th century, the theory of constructivism began to challenge instructivism. Since then, constructivism has contributed its humanistic perspective to ID. Constructivism goes beyond Piaget’s theory that asserted knowledge is not simply transmitted from teacher to student, but is actively constructed and reconstructed by the mind of the learner. Learners do not transfer knowledge from the external world into their memories; rather they create interpretations of the world based upon their past experiences, beliefs, and their interactions in the world. Thus, learning should be “inside out” instead of “outside in” activities. This consideration contributed to ID the concepts of intrinsic motivation, learner-centered/learner-controlled, and situated learning. In 1978, Vygotsky’s theory of Zone of Proximal Development (ZPD) suggested that learners could be improved and could achieve at the level of ZPD if they could participate in more advanced learning activities which involve social interactions, both institutional and interpersonal. The concept of ZPD relates to learners and refers to the opportunity for increased growth and development by the learner when he or she is working in proximity with a “more competent other,” who may be a peer or a teacher. Typically the learner moves from a current level of elementary competency to a new level somewhat beyond what would be possible just from ordinary development as a result of the stimulating influence of the “more competent other” on his developing knowledge an/or skill. The ZPD theory contributed to ID the concepts of collaborative learning, learning community, and scaffolding. To sum up, the constructivists in the field of ID have raised three major concerns:

First, learning should be a learner actively participating in social construction of knowledge, instead of passively receiving pre-designed constructed knowledge. Learners are most likely to become intellectually engaged when they are working on personally meaningful activities and projects.

Secondly, constructivism emphasizes diversity. It recognizes that learners can make connections with knowledge in many ways. Thus, constructionist learning environments encourage multiple learning styles and multiple representations of knowledge. Constructivism claims that reality is more in the mind of the learner, that the learner constructs a reality, or at least interprets it, based on his/her experiences. Constructivists suggest that the learning goal, objectives should be negotiable between students and instructors to have more room for individual differences.

Thirdly, since every one perceives knowledge differently, some researchers suggested assessment should be a goal free evaluation, to assess learners’ knowledge construction in real-world contexts like authentic tasks, problem-solving tasks, case study, or situating learning experiences to assess learners’ knowledge construction relative to real-world contexts. Learning outcomes should focus on the process of knowledge construction and allow students to present and interpret their learning with multiple perspectives. Learning goals should be determined from authentic tasks with more specific objectives resulting from the process of solving the real-world task. Authentic tasks are those that have real-world relevance and utility, that integrate those tasks across the curriculum, that provide appropriate levels of complexity, and that allow students to select appropriate levels of difficulty or involvement.
We address two specific research questions in this article. First, many past studies of expository text comprehension have indicated that domain knowledge has a large bearing on comprehension success. Although the effect of background knowledge is theoretically expected for the comprehension of expository materials (e.g., Kintsch, 1988; 1998), the strong effect of background knowledge evidenced in previous studies (e.g., Chiesi et al., 1979) may be partly explained by the nature of the task. Our proposal is that the nature of expository text comprehension assessed will differ as a function of whether the source text is available during question answering.

In order to explore this possibility, we asked participants to answer comprehension questions in one of two conditions: absence of the passage after reading the text (without-text condition) or presence of the passage after first reading the passage (with-text condition).

When readers answer comprehension questions in the with-text condition, their performance is likely to be influenced by a variety of individual difference factors because they are likely to engage in more active and extensive text processing. Hence, we would expect that making the text available to readers while answering comprehension questions should reduce the effect of prior domain knowledge on performance.

The second research question concerns whether comprehension assessments using multiple-choice questions are comparable to those using open-ended questions. In order to examine this issue, we directly compared readers’ answering performance on multiple-choice and open-ended versions of the same questions. If multiple-choice question performance correlates highly with open-ended question performance and the correlations between question performance and prior knowledge are similar, multiple-choice questions and open-ended questions can be considered to measure reading comprehension in similar way.

One possibility is that answering multiple-choice questions is somewhat similar to answering open-ended questions at least when the source text is not available and when the quality of distractor options are carefully controlled such that test takers need to engage in a careful evaluation of which answer option best matches the contents of the source text according to memory. This hypothesis is based on cognitive psychological research in memory (Lindsay & Johnson, 1987; Zaragoza & Koshmider, 1989, also see Johnson, Hashtroudi, & Lindsay, 1993, for a discussion of the effect of task format on recognition memory), which suggests that the selection of the correct answer among perceptually and/or conceptually similar multiple-choice options requires the retrieval of high quality representations of the source information (e.g., text content in this context).

With respect to the condition in which readers answer questions by referring to texts, given that readers can use diverse strategies to answer questions based on any contextual support available, extra scaffolding provided in the form of answer options is likely to influence performance. As a consequence, the correlation between multiple-choice questions and open-ended questions is likely to be lower in the with-text condition.

**Experiment 1**

**Materials.** The text was a 437-word expository passage entitled “Why is There Sex?” The passage discusses the evolutionary benefits and costs of sexual reproduction in comparison to
asexual reproduction. The text was obtained from a chapter on evolutionary psychology in the psychology textbook, “Learning and Cognition” (Leahy & Harris, 1997). Modifications were made to the text to increase reading ease. Specifically, referential terms (exchanging pronouns with nouns) and causal connectives (e.g., however and because) were added to make the text easier to comprehend.

Two booklets were created for the experiment. Booklet 1 contained the science text, open-ended comprehension questions and multiple-choice comprehension questions. Two versions of Booklet 1 were produced; Version A instructed participants to read the passage and then answer questions without referring back to the passage. Version B instructed participants to read the passage and then answer questions. Version B also informed participants that the passage was available for reference when answering the questions. Booklet 2 contained prior domain knowledge questions about evolutionary psychology.

There were 8 open-ended and 8 multiple-choice comprehension questions in booklet 1. A systematic method was used to construct the questions. First, we constructed eight open-ended questions that tapped three different levels of comprehension. These three classes of questions were text-based, local bridging/inference, and global bridging/inference. A question was classified as text-based if its answer could be provided using information explicitly stated within a given sentence. This type of question should be relatively easy to answer because the relations between the question stem and requested information are explicitly stated within particular sentences. A question was classified as a local bridging/inference if its answer required the integration of information located within 5 clauses (usually within adjacent sentence pairs). Answering this type of question requires an understanding of the relationships between ideas or concepts across adjacent sentences, thereby, tapping a slightly higher level of comprehension, which involves establishing relationships between adjacent sentences. Finally, far or global bridging/inference questions are similar to local questions but involve the integration of information located across larger distances (more than two sentences apart). Thus, this question is expected to measure readers’ understanding of relationships between multiple ideas located in a relatively global area of the text.

1. 陳述此一研究的研究問題並說明作者為何做此選擇，作者的預期結果。 （20 分）
2. 描述此一研究所用的實驗材料，不必逐字翻譯，但必須包含重要的資訊。 （10 分）