國立政治大學英國語文學系碩士在職專班碩士論文

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高職應用外語科學生四技二專統一入學測驗英文專業考科
與看圖寫作成績之相關性研究

A Study on Correlations between English Professional Subject of the Technological and

Vocational Education Joint College Entrance Exam and Picture Writing Performance of

Students from Department of Applied Foreign Languages of Vocational High Schools
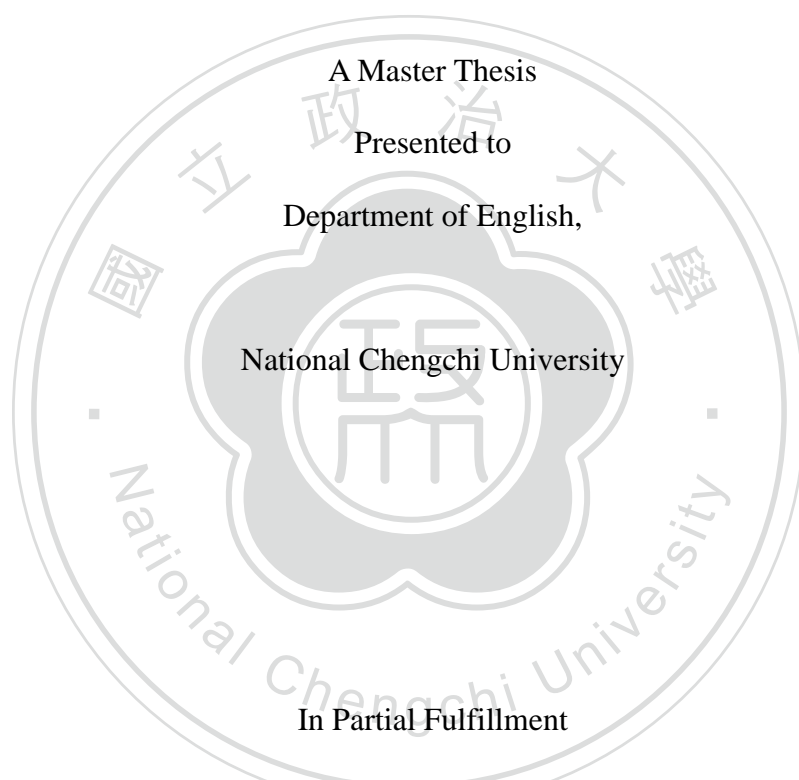
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A Study on Correlations between English Professional Subject of the Technological and

Vocational Education Joint College Entrance Exam and Picture Writing Performance of

Students from Department of Applied Foreign Languages of Vocational High Schools

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　　　　　成績之相關性研究

指導教授：尤雪瑛博士

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論文提要內容：

　　在評量學生的寫作能力時，通常採用直接測驗。然而，四技二專統一入學測驗英文專業考科卻採用間接測驗，來評量應用外語科學生的英文寫作能力。本研究旨在檢視專業考科之效力，並研究如何改進現行的考試方式。

　　為了達成該研究目的，119 位應用外語科三年級學生參與本研究。本研究間接測驗試題採用四技二專統一入學測驗英文專業考科，直接測驗試題採用看圖寫作，以檢視專業考科與直接寫作成績之間的相關性。此外本研究使用問卷以調查學生對直接與間接寫作測驗的看法。

　　結果顯示，專業考科與看圖寫作之間呈現中度相關，表示該專業考科在某種程度上，能顯示出受試者的直接寫作能力。在四個大題中，段落組成及段落語意不連貫句子挑選與看圖寫作呈現中度相關，因此，這兩個大題較能顯示出受試者的直接寫作能力。

　　然而，問卷調查結果發現，受試者運用篇章結構的知識來完成間接測驗。但是，卻沒有運用相同的概念於直接測驗中。此種現象可能是因為傳統的寫作教學方式著重

在文法分析及單字教學。因此，四技二專統一入學測驗的英文專業考科應同時施測直接與間接測驗，以期對英文寫作教學產生正面的回衝效應。

關鍵字：直接測驗，間接測驗，四技二專統一入學測驗，專業考科，看圖寫作

Abstract

Direct writing assessment is usually employed to evaluate students' writing proficiency. However, the Technological and Vocational Education (TVE) Joint College Entrance Exam adopts indirect writing assessment to assess students from Department of Applied Foreign Languages (DAFL) in English Professional Subject (EPS). The purpose of the present paper is to examine the effectiveness of the EPS indirect writing test and how the current practice can be improved.

For serving the purpose, a total of 119 third-year DAFL students participated in the study. The researcher uses indirect writing assessment, the EPS indirect writing test, and direct writing assessment, a picture writing task, as the testing instruments to examine the correlation between the two writing measures. Moreover, questionnaires are used to investigate the participants' perceptions of the two writing tasks.

Results indicated that the EPS multiple-choice writing test and the picture writing task exhibited a moderate correlation, suggesting the indirect test could, at least in part, serve as a good indication of the students' writing competence in direct writing. Results also showed that sentence insertion (SI) and sentence deletion (SD), among the four subtests, moderately correlated with the direct writing task. The two subtests could thus be depended on as a better indication of the participants' direct writing proficiency.

Nevertheless, questionnaire findings displayed that the students applied discourse-level knowledge in the indirect test. Nonetheless, the same concept was not applied to the direct task probably because of the traditional teaching approach to

English writing, focusing on grammar analysis and vocabulary teaching. Therefore, the two writing tasks should be combined in the entrance exam to produce positive washback effect on writing instruction.

Key Words: direct writing assessment, indirect writing assessment, TVE Joint College Entrance Exam, English Professional Subject, picture writing

CHAPTER ONE

INTRODUCTION

Background and Motivation

Writing has long been regarded as a key indicator of language learners' English proficiency level. Therefore, large-scale assessments include measures to examine test-takers' ability in writing performance. For example, Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS), the two world-renowned college admission tests, require examinees to demonstrate their writing ability. In Taiwan, General English Proficiency Test (GEPT), the prevalent island-wide English proficiency examination, contains writing tests from beginning to advanced levels. It is thus evident that writing is a vital language ability that cannot be ignored.

Since writing skill is essential to language learning, the assessment of written language skills is also getting more and more important. Two distinctly different approaches to writing skill assessment, direct and indirect measurement, have evolved from the long history of testing writing. Both kinds of assessment have proved to be successful in the writing assessment literature, but both have their own advantages and disadvantages (Breland & Gaynor, 1979; Cooper, 1984; Stiggins, 1981; Teng, 2002).

Direct and indirect measures of writing ability are both employed in the entrance examinations in Taiwan to test students' writing proficiency. Both of the major college entrance exams, Scholastic Aptitude Test (SAT) and Department Required English Test (DRET), draw on a direct writing component to evaluate students' writing ability. In SAT, examinees are often asked to describe a series of pictures; as for DRET, essay guided writing is required. On the other hand, the Technological and Vocational Education (TVE) Joint College Entrance Examination

capitalizes solely on indirect writing assessment while assessing students from Department of Applied Foreign Languages (DAFL) in English Professional Subject (EPS). The exam measures students' writing proficiency through five multiple-choice subtests, including topic sentence selection (TSS), sentence insertion (SI), sentence deletion (SD), sentence rearrangement (SR) and cloze. The examinees only need to read the stem and to pick the best answer from the distractors.

Although direct testing method has become the trend of writing assessment, EPS uses indirect testing of writing skill due to issues of practicability. According to Teng (2002) and You, Chang, Joe and Chi (2002), from the 1998 to 2000 academic year, direct writing testing was adopted. Free writing or guided writing was usually used to examine the students' writing proficiency. Nevertheless, from the 2001 academic year, as the implementation of the Examination and Enrollment Separation Program (EESP), the TVE Joint College Entrance Exam changed the administration of the EPS writing test from summer vacation to early May. Taking the number of examinees (about 3,000 to 4,000 each year) into consideration, the entrance exam decided to adopt indirect writing measurement because it was impracticable to assemble enough professors to grade students' writing in the middle of the semester. The EPS writing test thus used multiple-choice items to assess students' writing proficiency by testing the subsets of skills that constituted the components of writing competence.

Due to the present constraint of the TVE Joint College Entrance Exam, the EPS multiple-choice writing test has been implemented for more than 10 years. Nevertheless, few studies have been done to investigate the efficacy of the indirect test over the years. Among the few studies concerning the EPS writing test, studies have been conducted to evaluate the appropriateness of the question types and items (P. Lin, 2005; You et al., 2002). Others have been devoted to discussing the suitability

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of the indirect format (P. Lin, 2005; National Teachers' Association [NTA], 2011; Teng, 2002; TVE Joint College Admissions [TVEJCA], 2011; You et al., 2002). Nonetheless, little research has been carried out to examine the correlation between students' performance in the EPS indirect test and their writing results in direct writing task.

In addition, researchers have not yet reached a conclusion whether the question types are suitable or too difficult for the students (P. Lin, 2005; You et al., 2002). It is thus important to inspect which of the four subtests has higher correlation with the students' writing performances in direct writing.

Although lots of studies have indicated that indirect measures of writing ability could not provide full information about examinees' writing competence profiles (Ackerman & Smith, 1988; Breland & Jones, 1982; Carlson et al., 1985; Chang, 2003; Cooper, 1984; Quellmalz et al., 1982; Stephenson & Giacoboni, 1988; Stiggins, 1981), some researchers and writing composition instructors have claimed that the EPS indirect writing test could assess DAFL students' basic writing ability without producing writing (P. Lin, 2005; You et al., 2002). Hence, it is also important to examine the students' perceptions of the EPS writing test and direct writing respectively.

Purpose of the Study

The purpose of the thesis is to examine the correlations between the performances of DAFL student writers in the EPS objective writing test and direct English writing. The correlations between the scores on the four subtests of EPS and direct writing are investigated in the study to see whether there are differences between the subtests. Besides, the study also discusses examinees' perceptions of the EPS multiple-choice writing test and direct writing task. In this regard, the present study aims to examine the skills the students applied and the difficulties they faced

while taking the two writing tasks. The students' opinions on the two types of writing tasks and on the EPS writing test of the TVE Joint College Entrance Exam are also investigated. Through the inquiry into the relationship of the indirect writing test of EPS and direct writing and the discussion on the students' perceptions of the two writing tasks, we may have a better understanding of whether the EPS multiple-choice test can be depended on as a good indication of DAFL student writers' writing proficiency.

Research Questions

In order to achieve the purposes of the current study, the following questions are addressed:

1. How do the scores of the EPS multiple-choice writing test of the TVE Joint College Entrance Exam correlate with direct writing performance for DAFL students of vocational high schools?

2. Which of the subtests in the EPS multiple-choice writing test of the TVE Joint College Entrance Exam is more closely related to direct writing for DAFL students of vocational high schools?

3. What are the examinees' perceptions of the EPS multiple-choice writing test of the TVE Joint College Entrance Exam and toward direct writing task?

Significance of the Study

The present study is intended to investigate the correlations between the scores obtained from the EPS multiple-choice writing test and direct writing task. The utility of the four subtests of the EPS writing test in assessing writing ability is also examined. Furthermore, the present study aims to discuss the test-takers' perceptions of the direct and indirect writing tasks. The results of the current study may thus provide an empirical basis for the appropriateness of the present format of writing measurement.

The designers of the EPS test items as well as DAFL teachers may benefit from the correlational results. For the formulators of the EPS test questions, the result may help them judge which item types may better reflect DAFL students' writing competence and determine whether the objective test can be counted on as a valid writing test. In the case of DAFL teachers, they could gain a clearer insight into the nature of the indirect measure of writing skill. Once they understand the feature of the writing test, they may know what to focus on while teaching students how to cope with the entrance exam and how to write better compositions.

Definition of Key Terms

Key terms used in the present study are defined as follows:

1. Direct Writing Assessment: Direct writing assessment requires examinees to do actual writing in reply to a given prompt. Examinees' written texts are read and scored by two or more raters according to a pre-set yardstick (Breland & Gaynor, 1979; Stiggins, 1981).

2. Indirect Writing Assessment: Indirect writing assessment requests examinees to respond to multiple-choice items instead of performing actual writing (Breland & Gaynor, 1979; Cooper, 1984).

3. Picture Writing: Picture writing usually contains a series of one to four pictures. Examinees are required to write a passage in response to the pictorial stimulus. The present study uses a three-frame picture sequence as the picture writing test to evaluate DAFL students' proficiency of direct writing.

4. The EPS Multiple-choice Writing Test of the TVE Joint College Entrance Exam: The writing test takes the form of multiple choices to assess DAFL students' proficiency in writing. The test consists of 40 items, divided into five subtests, including TSS, SI, SD, SR and cloze. In the present study, the first four item types (30 items) are used as the testing instrument.

CHAPTER TWO

LITERATURE REVIEW

This chapter is divided into six sections in an attempt to review the literature relevant to the present study. First, theoretical perspectives on writing assessment are provided. Second, an overview of direct and indirect writing assessment is introduced. Third, uses of direct and indirect writing assessment are presented. Fourth, relationship between direct and indirect writing assessment is discussed. Fifth, assessment by combination of direct and indirect tests of writing is suggested. The last section of this chapter reviews the studies on the multiple-choice writing test of the English Professional Subject (EPS) of the Technological and Vocational Education (TVE) Joint College Entrance Exam.

Theoretical Perspectives on Writing Assessment

Writing has long been considered a vital indication of learners' language ability. As writing skill plays a crucial role in language learning, the assessment of writing also becomes increasingly important. In assessing writing, it is essential to consider the different aspects of writing ability and writing test. Therefore, the constructs of writing ability is first discussed in this section. Next, test usefulness in terms of six qualities is presented.

Constructs of Writing Ability

Before assessing the skill, we need to make sense of what constitutes writing ability because specifying the components of language knowledge involved in writing is fundamental to designing a writing test (Weigle, 2002). Grabe and Kaplan (1996), using the studies of Hymes (1972), Canale and Swain (1980), and Bachman (1990) as a basis, itemized three types of writing ability. As shown in Table 2.1, the three types of language knowledge of writing include linguistic knowledge, discourse knowledge and sociolinguistic knowledge. Linguistic knowledge is composed of basic

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components of language, that is, knowledge of phonology, morphology, vocabulary and syntactic structure. Discourse knowledge consists of knowledge of how to connect sentences to form cohesive and coherent texts. With sociolinguistic knowledge, it signifies knowledge of how to use language appropriately in various social contexts or settings.

Table 2.1 Taxonomy of Language Knowledge of Writing (Grabe and Kaplan, 1996)

I. Linguistic knowledge
    A. Knowledge of the written code
        1. Orthography
        2. Spelling
        3. Punctuation
        4. Formatting conventions (margins, paragraphing, spacing, etc.)
    B. Knowledge of phonology and morphology
        1. Sound/ letter correspondences
        2. Syllables
          (a) onset
          (b) rhyme/ rhythm
          (c) coda
        3. Morpheme structure (word-part knowledge)
    C. Vocabulary
        1. Interpersonal words and phrases
        2. Academic and pedagogical words and phrases
        3. Formal and technical words and phrases
        4. Topic-specific words and phrases
        5. Non-literal and metaphoric language
    D. Syntactic/ structural knowledge
        1. Basic syntactic patterns
        2. Preferred formal writing structures (appropriate style)
        3. Tropes and figures of expression
        4. Metaphors/ similes
    E. Awareness of differences across languages
    F. Awareness of relative proficiency in different languages and registers
II. Discourse knowledge
    A. Knowledge of intrasentential and intersentential marking devices (cohesion, syntactic parallelism)

B. Knowledge on informational structuring (topic/ comment, given/ new, theme/ rheme, adjacency pairs)

C. Knowledge of semantic relations across clauses

D. Knowledge to recognize main topics

E. Knowledge of genre structure and genre constraints

F. Knowledge of organizing schemes (top-level discourse structure)

G. Knowledge of inferencing (bridging, elaborating)

H. Awareness of differences in features of discourse structuring across languages and cultures

I. Awareness of different proficiency levels of discourse skills in different languages

III. Sociolinguistic knowledge

A. Functional uses of written language

1. Apologize
2. Deny
3. Complain
4. Threaten
5. Invite
6. Agree
7. Congratulate
8. Request
9. Direct
10. Compliment

B. Application and interpretable violation of Gricean maxims

C. Register and situational parameters

1. Age of writer
2. Language used by writer (L1, L2, …)
3. Proficiency in language used
4. Audience considerations
5. Relative status of interactants (power/ politeness)
6. Degree of formality (deference/ solidarity)
7. Degree of distance (detachment/ involvement)
8. Topic of interaction
9. Means of writing (pen/ pencil, computer, dictation, shorthand)
10. Means of transmission (single page/ book/ read aloud/ printed)

D. Awareness of sociolinguistic differences across languages and cultures

E. Self-awareness of roles of register and situational parameters

The detailed list of constructs of writing ability, as Weigle (2002) points out,

provides a framework for designing writing tests. The taxonomy, giving an outline of the assorted aspects of writing proficiency, may be of help while developing writing tasks for assessment. For that reason, the present study applies the taxonomy of writing constructs to the design of direct and indirect writing questionnaires to investigate the writing skill constructs examinees utilize while doing the direct and indirect writing tasks respectively. Nevertheless, only the first two kinds of writing constructs—linguistic and discourse knowledge—would be examined because of the nature of the writing tasks.

Test Usefulness

After elaborating the constructs of writing ability, in the development of a writing test, we should also look into its quality. Bachman and Palmer (1996) observed that "the most important quality of a test is its usefulness" (p.17). They described test usefulness as having six qualities: reliability, construct validity, authenticity, interactiveness, impact, and practicality.

According to the researchers, although all of the six qualities of test usefulness are important, it is practically impossible to augment each quality. The six qualities would be laid different stress for different assessment situations. Test developers, imposed the restriction of their particular assessment contexts, would try to strike a balance between the six qualities and to maximize overall usefulness in developing writing tests.

For the present study, validity and reliability are the two qualities that receive the greatest attention. The following sections concerning the usefulness of direct and indirect writing assessment will center primarily on these two qualities.

<div align="center">

Direct and Indirect Writing Assessment

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In the long history of the assessment of writing ability, two apparently different measures have evolved: direct and indirect writing measurement. In order to have a

better understanding of the nature of the writing measures, a brief introduction to the two writing assessments is given. A framework of direct and indirect writing models is discussed following each introduction. The present study then applies the two writing models to direct and indirect writing questionnaires to inspect the difficulties examinees might encounter while undertaking the two writing measures.

Direct Writing Assessment

Direct writing assessment requests test takers to do actual writing in response to a given prompt. Each text written by the examinees is read and scored independently by two or more raters based on a pre-set standard (Breland & Gaynor, 1979; Stiggins, 1981). Item types for direct measures of writing ability consist of blank-filling, sentence completion/combination, short answer, and guided writing (including writing with offered words and phrases, topic sentence writing, picture writing, question-answering, situation-based writing). The method is thus thought of as a production measure, tending to assess the whole writing ability integratively rather than specific constructs in an isolated way (Cooper, 1984; Stiggins, 1981).

The construct skills measured by this approach can be expounded by Ackerman and Smith's (1988) comprehensive conceptual model of direct writing behaviors. Building on the Hayes-Flower (1980) writing model, Ackerman and Smith illustrated the process involved in creating written texts and explored the tasks required of direct writing assessment. As shown in Figure 2.1, the writing process involves task environment, the writer's long-term memory, and cognitive writing processes. The task environment refers to the writing assignment and the text produced so far. The writer's long-term memory is composed of a dictionary and an encyclopedia. The final element, the cognitive writing processes, consists of three sub-components: planning, translating, and reviewing.

TASK ENVIRONMENT

WRITING ASSIGNMENT
- Topic
- Audience
- Motivating Cues

TEXT
PRODUCED
SO FAR

ENVIRONMENT
(unconscious input)

THE WRITER'S LONG
TERM MEMORY

"Dictionary"

"Encyclopedia"

PLANNING

GENERATING

ORGANIZING

GOAL
SETTING

TRANSLATING

REVIEWING

READING

EDITING

MONITOR

FORMAL TRAINING
(conscious input)
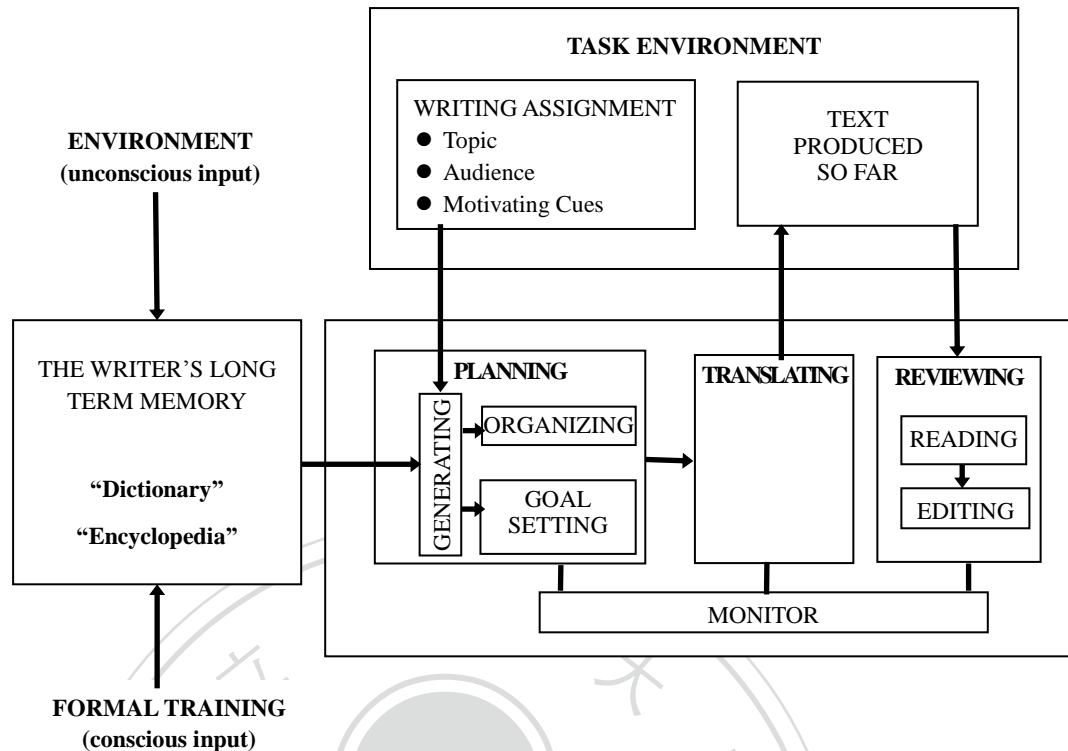
Figure 2.1 Direct Writing Model (Ackerman & Smith, 1988)

The three sub-components of writing processes are interdependent, but interactive and recursive. The planning process contains generating ideas, organizing ideas, and goal setting. The translating process converts the ideas or thoughts into written language. The function of the reviewing process is to check what has been written and to revise the text. When producing an essay, a writer goes through the three writing processes and draws on some higher-order skills that demand reasoning (Ward et al., 1980). The results of direct writing measures can thus offer sufficient information to judge examinees' real writing proficiency (Stiggins, 1981).

Indirect Writing Assessment

Indirect assessment, also called objective assessment, is regarded as a recognition measure because it requires test takers to respond to multiple-choice items instead of performing actual writing (Breland & Gaynor, 1979; Cooper, 1984). The objective test covers components of what we refer to as the constructs of writing ability: punctuation, vocabulary, grammar, sentence construction, and organization

(Grabe & Kaplan, 1996; Stiggins, 1981; Weir, 2005). These constructs are explicit to an extent that the responses are either right or wrong (Stiggins, 1981).

The construct skills and process associated with multiple-choice writing tests can be clarified by the conceptual writing model of indirect writing behaviors (Ackerman & Smith, 1988). Although similar to the direct writing model, the objective test model only consists of one primary component: the reviewing process (see Figure 2.2).
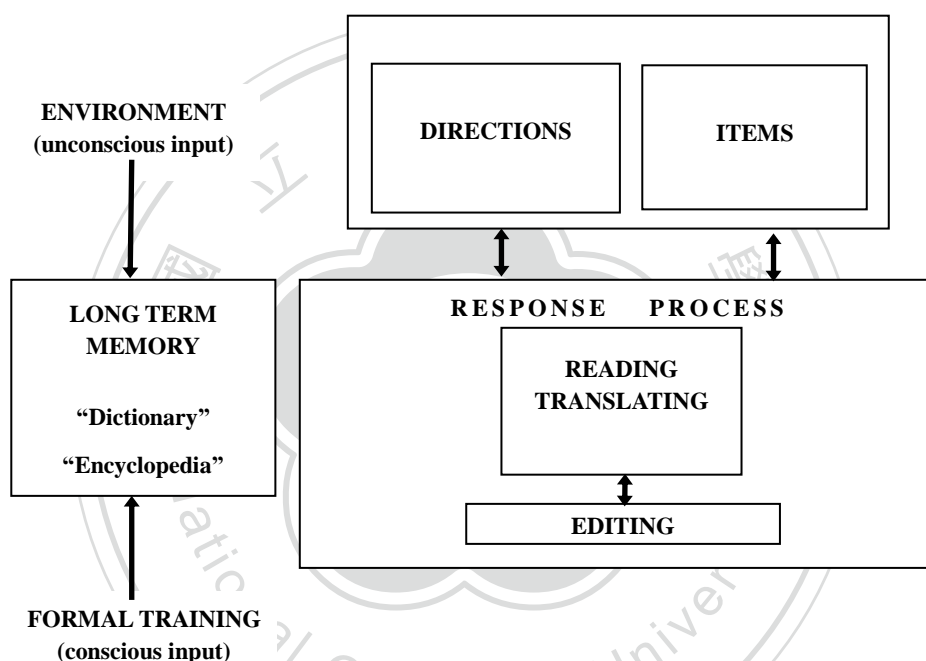
Figure 2.2 Indirect Writing Model (Ackerman & Smith, 1988)

The model clearly points out the cognitive process involved in indirect testing procedure. In response to a multiple-choice item, test takers read and encode the content of the stem and alternatives into their working memory. Then, they edit the stem by matching the prior linguistic knowledge in memory and select a proper letter or number for the correct answer.

Uses of Indirect and Direct Writing Assessment

Past research concerning direct and indirect measurement of writing skills has had a fierce argument in favor of each since the two approaches have their own

advantages and disadvantages (Breland & Gaynor, 1979; Cooper, 1984; Stiggins, 1981; Teng, 2002). In the literature, proponents of both measures have expressed their concern over validity and reliability when suggesting the use of the two approaches.

Uses of Indirect Writing Assessment

During the 1950s and 1960s, owing to the prevalence of the discrete-point testing and psychometric-structuralist theory, reliability was prioritized over other testing concerns (Grabe & Kaplan, 1996; Hamp-Lyons, 1991). Indirect testing of writing skills was thus advocated because of its high reliability. Moreover, the resulting data of indirect writing could be scored efficiently with relatively low scoring cost (Breland & Gaynor, 1979; Cooper, 1984; Grabe & Kaplan, 1996; Shohamy et al., 1992; Stiggins, 1981; White, 1995). Besides high reliability, objective measure of compositional ability also has predictive validity. If carefully developed, the results of the assessment could predict success in examinees' future academic writing (Breland & Gaynor, 1979; Grabe & Kaplan, 1996; Greenberg, 1986).

Despite its high scoring reliability, indirect writing assessment is gradually attacked for its lack of content and construct validity. Researchers have stated that the scores of the discrete-point items could not represent how good examinees really are in actual writing (Grabe & Kaplan, 1996; Weir, 2005). Since the objective measurement relies heavily on test takers' reading or editing skills rather than real writing skills (Ackerman & Smith, 1988; Cooper, 1984; Shohamy et al., 1992; Stiggins, 1981), harmful washback effect on English learning and on instruction could occur (Hughes, 2003; Weir, 2005). Under the influence of the indirect approach for assessing writing ability, writing instruction may just involve practice of multiple-choice items instead of practice in actual writing. Thus, the approach may demonstrate to the students that writing is not important (Breland & Gaynor, 1979; Cooper, 1984; White, 1995).

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Uses of Direct Writing Assessment

Beginning in the 1970s, uses of indirect writing assessment started to be out of favor due to increasing emphasis on communication ability and on validity (Grabe & Kaplan, 1996; Hamp-Lyons, 1991). Direct measures of writing skills were favored over multiple-choice testing by degrees at that time. Because the approach requires an active response to a prompt, it has high construct validity. Moreover, direct writing tests can reflect the actual tasks examinees might encounter in real-world writing circumstances (Breland & Gaynor, 1979; Shohamy et al., 1992; Stiggins, 1981; Weir, 2005; White, 1995). They are thus considered to be able to evaluate and reflect test takers' real writing proficiency. Furthermore, since practice for direct writing tests means practice of writing skills, the writing method can result in a beneficial washback effect on learning and on teaching (Hughes, 2003; Shohamy et al, 1992; White, 1995). Accordingly, it conveys a message to the teachers that writing skills are highly valuable (Breland & Jones, 1982).

However, direct writing assessment still has its drawbacks concerning validity and reliability. The validity of direct measures of writing ability is threatened because sometimes the writing samples could not fully represent test takers' actual writing proficiency (Hughes, 2003) and because the assessment could not always successfully require examinees to demonstrate specific skills in the tasks (Cooper, 1984; Stiggins, 1981). In the case of reliability, direct writing assessment was mainly attacked for its comparatively low scoring reliability and high scoring cost (Ackerman & Smith, 1988; Breland & Gaynor, 1979; Cooper, 1984; Stiggins, 1981).

Nonetheless, the scoring reliability has been ameliorated over the years. Lumley (2002) maintained that through combining the following three factors: rater training, clearer description of scoring standard, and writing tasks, direct writing could reach higher reliability coefficient. Hamp-Lyons (2003) also asserted that inter-rater

reliability above .75 could be gained when calculating the degree of agreement between two or more scorers on the rating awarded to a given writing sample.

Due to its improved scoring reliability and high construct validity, direct testing of writing skills gradually gains in more popularity (Grabe & Kaplan, 1996; Hughes, 2003).

Relationship between Direct and Indirect Writing Assessment

To solve the debate on the uses of the two writing assessments, numerous researchers have conducted empirical studies to delve deeply into the relationship between direct and indirect writing assessment by examining the correlations between the scores obtained from the two measures (Benton & Kiewra, 1986; Breland & Gaynor, 1979; Chang, 2003; Godshalk et al., 1966; Hogan & Mishler, 1980; Moss et al., 1982; Ward, et al., 1980). Some researchers have reported strong to moderate correlations, while others have produced results that show low correlations.

Strong to Moderate Correlations between Direct and Indirect Tests of Writing

A relatively strong to moderate relationship between the two measures of writing ability is found at different educational levels. For example, investigating the direct and indirect performances among college freshmen, Breland and Gaynor (1979) found substantial correlations between the scores of the two approaches. They administered three 20-minute argumentative essays and the Test of Standard Written English (TSWE), three 30-minute, 50-item multiple-choice tests, on three different occasions. The scores of the three essays, read holistically by two raters, correlated .63 ($n = 819$), .56 ($n = 926$) and .58 ($n = 517$) with the corresponding TSWE scores. The correlation between the sum of the three direct assessments and the sum of the three indirect assessments was .76 ($n = 234$). Therefore, they concluded that the two writing measures inclined to assess similar skills.

In one of the seminal writing assessment studies, Godshalk, Swineford, and

Coffman (1966) reported significant correlations from .458 to .707 between College

Board English Composition Test (six objective tests and two interlinear exercises) and

five free-writing exercises among 646 secondary school students, enrolled almost

evenly from Grades 11 and 12. The six multiple-choice subtests consisted of

paragraph organization, usage, sentence correction, prose groups, error recognition,

and construction shift. The usage ($r = .707$) and sentence correction ($r = .705$) showed

the highest degree of correlations with essay total score, while the lowest correlation

coefficient was obtained in scores on paragraph organization ($r = .458$).

Hogan and Mishler (1980) also reported similar levels of correlations between

direct and indirect tests of writing skills for students at elementary and junior high

school levels. A 20-minute picture writing and the Metropolitan Achievement

Test—Language Instructional Tests (MAT-LIT) were administered to roughly 140

students in Grade 3 and 160 students in Grade 8. The correlations between the

MAT-LIT and the picture writing, scored by two independent raters with a third reader

introduced to settle discrepancies, were .68 and .65 for Grade 3 and 8 respectively.

Low Correlations between Direct and Indirect Tests of Writing

However, other research has shown a low relationship between the results of

direct and indirect measures of writing ability using students at various academic

levels. For instance, Moss, Cole, and Khampalikit (1982) compared scores of direct

and indirect writing assessment for students at Grades 4, 7, and 10 and attained lower

correlations at lower grade levels. The 40-item objective test was taken from the

Language Test of the 3Rs Achievement Test, whereas the two essay tasks were chosen

from the National Assessment of Educational Progress (NAEP). Comparisons of the

two writing measures for the Grade 10 students yielded moderate correlations, which

was quite similar to other studies using students at college levels. However, the

correlational results of Grades 4 and 7 were generally lower than those of Grade 10.

Moss et al. thus pointed out that the scores obtained from the multiple-choice tests were not quite indicative of the participants' corresponding scores on direct measurement of writing competency especially for students at elementary school levels.

Comparing 172 college students' ability to formulate scientific hypotheses in free-response and machine-scored forms, Ward, Frederiksen, and Carlson (1980) obtained low correlations between the corresponding scores from the two formats. Ward et al. concluded that the two formats assessed quite different constructs and that the ability to produce solutions was more important than the ability just to recognize them since questions in real life would rarely be presented in multiple-choice items.

Another study that resulted in low correlations between direct and indirect writing tests was done by Benton and Kiewra (1986). Apart from investigating the validity of the multiple-choice tests underscoring the grammatical usages in measuring examinees' writing proficiency, Benton and Kiewra enquired into the efficacy of the tests assessing organizational ability as well. Benton and Kiewra employed one TSWE test and four organizational tests to measure the utility of these tests in assessing 105 undergraduates' writing ability in two essays. The four organizational tests, composed of anagram solving, word reordering, sentence reordering, and paragraph assembly, represented organizational ability at lexical, sentence, paragraph, and text levels of discourse production respectively. Although the essay scores were significantly correlated with the test-takers' performances on the TSWE and the four organizational tests, the correlations coefficients were relatively low. The highest correlation with the essay scores was attained in a composite organizational score (the sum of all four organizational tests). The results indicated that in the assessment of writing proficiency, tests emphasizing organizational ability should be included. On the other hand, the score of the sentence reordering test was

associated with the lowest correlation with the measure of writing ability. It was concluded that aside from paragraph-level organizational ability, the lexical, sentence, and text levels of discourse production were also needed in examining organizational ability.

In Taiwan, Chang (2003) also found a low correlation between self-developed indirect and direct writing tests for eighth graders ($n = 908$) and ninth graders ($n = 1012$). The indirect writing test consisted of vocabulary, grammar, and sentence rearrangement. The direct writing tasks included sentence combination, picture writing, and essay writing. Chang found a significant but low correlation of .182 between the scores on the participants' performances in the same grammatical patterns found in the two writing tests. The results implied that the two methods seemed to measure, at least in some way, different constructs.

In sum, different degrees of correlation coefficients have been found between the scores of the two approaches. The present study thus attempts to find out the correlations between the EPS writing test and direct writing task so as to examine the validity of the indirect writing measure to reflect examinees' actual writing ability.

Assessment by Combination of Direct and Indirect Writing Measures

From the reviewed literature, it is clear that direct and indirect writing assessments have their strengths and limitations. Direct writing assessment is advocated by many researchers and writing teachers who think that only by involving examinees in doing the actual writing can we assess their writing competence. Regardless of its high validity, direct measure is questioned about its unrepresentative samples and comparatively unreliable scoring. On the other hand, indirect writing measurement, the more efficient and objective method of testing writing, lacks validity. Since the two writing approaches bring about problems when implemented alone, a lot of researchers have suggested that the two approaches be used in one

single measure to integrate the advantages of each approach (Ackerman & Smith, 1988; Benton & Kiewra, 1986; Breland & Gaynor, 1979; Breland & Jones, 1982; Chang, 2003; Cooper, 1984; Godshalk et al., 1966; P. Lin, 2005; Teng, 2002).

In this section, the integration of the advantages of the two writing measures is discussed. Next, ways of combining the two writing measures are presented.

Combined to Assess Both Basic and Higher-order Writing Abilities

Numerous researchers have believed that the two writing approaches provide unique information about examinees' profiles of writing competence (Ackerman & Smith, 1988; Breland & Jones, 1982; Carlson et al., 1985; Chang, 2003; Cooper, 1984; Quellmalz et al., 1982; Stephenson & Giacoboni, 1988; Stiggins, 1981). Once direct and indirect writing assessments are combined, they can benefit from the strengths of both sides. The two measures can be used for assessing different writing competence profiles: basic and higher-order writing abilities.

For example, Cooper (1984) stressed that the best method to measure composition skills should contain an essay as well as a multiple-choice section. In so doing, each measure could complement what the other could not assess directly. Examinees' higher-order skills, such as organization, clarity, sense of purpose, and idea development, could be revealed by direct writing performances. On the other hand, lower-level skills, like spelling, mechanics, and grammatical usage, could be examined by the scores of the multiple-choice portions.

Ackerman and Smith (1988) also suggested that the two techniques be combined in one writing test. Ackerman and Smith found that indirect writing was intended to evaluate examinees' declarative knowledge, the preliminary rules first learned in the development of writing skills. But direct writing aimed at evaluating procedural knowledge of writing, the ability required in the final stage of writing development. After examining the factor structure of direct and indirect methods of

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writing assessment, Ackerman and Smith concluded that the higher-order procedural writing skills could be more accurately assessed with direct writing tasks and that the basic declarative writing skills should be measured by indirect writing tests. Through the combination of both methods of writing assessment, examinees could demonstrate both the procedural and declarative writing skills in one single writing test.

Breland and Jones (1982) provided best empirical evidence to prove that the two approaches were responsible for assessing different construct skills. They rescored 806 20-minute essays written for the English Composition Test (ECT) in terms of 20 writing characteristics. As indicated in Table 2.2, the 20 characteristics are classified into discourse, syntactic, and lexical categories. Discourse characteristics are composed of nine features, regarded as the overall quality of compositions. Syntactic characteristics, consisting of six features, relate to sentence-level traits of writing ability. In the case of lexical characteristics, the five features represent word-level indicators of compositions.

Table 2.2 Listing of 20 Writing Characteristics (Breland & Jones, 1982, p.6)

Discourse Characteristics	Syntactic Characteristics	Lexical Characteristics
1. Statement of thesis	10. Pronoun usage	16. Level of diction
2. Overall organization	11. Subject-verb agreement	17. Range of vocabulary
3. Rhetorical strategy	12. Parallel structure	18. Precision of diction
4. Noteworthy ideas	13. Idiomatic usage	19. Figurative language
5. Supporting material	14. Punctuation	20. Spelling
6. Tone and attitude	15. Use of modifiers	
7. Paragraphing and transition		
8. Sentence variety		
9. Sentence logic		

Among the 20 characteristics, eight of them could evidently predict the original

ECT essay holistic score. Of the eight characteristics, five of them belonged to discourse-level skills. The result indicated that essay scores counted chiefly on examinees' discourse or higher-order writing ability.

Breland and Jones added that ECT direct and indirect writing measures should be combined to maximize the effectiveness of the writing test. The multiple correlation between the original ECT objective raw score and the ECT essay score was .58. But when the objective scores were combined with significant direct characteristics, the multiple correlation jumped to .70. As a consequence, combined measures could better estimate test takers' overall composition skills.

Ways of Combining Direct and Indirect Measures

From the above studies, most researchers have agreed that direct and indirect measures of writing skill could be combined to complement what the other could miss. Nonetheless, researchers still cannot reach a consensus on how to combine the two measures. Teng (2002) proposed that writing tests should add a direct writing component, accounting for 20 to 30% or even 50% of the total writing examination. Breland and Jones (1982) and Godshalk et al. (1966) did not specify the weighting of the direct writing component, but strongly recommended 20 minutes should be allotted for a direct writing component.

EPS Indirect Writing Assessment of TVE Joint College Entrance Exam

In the literature of writing assessment, some researchers, emphasizing construct and content validity, have proposed that good writing assessment should involve examinees in generating writing samples rather than select among alternatives in multiple-choice items (Grabe & Kaplan, 1996; Greenberg, 1986; Hughes, 2003; Shohamy et al., 1992; White, 1995). Others have made a suggestion of combining the two writing measures to obtain the advantages of both approaches. Nevertheless, the EPS writing assessment of the TVE Joint College Entrance Exam adopts only indirect

writing testing due to the present constraint of practicality (Teng, 2002; You et al., 2002).

Ever since the 2001 academic year, the first year of the administration of the entrance exam, little empirical studies have been conducted to probe into the efficacy of the EPS writing test. Among the studies on the EPS writing test, some studies have put emphasis on inspecting the appropriateness of the question types (P. Lin, 2005; You et al., 2002). Others have focused on discussing the suitability of the indirect format to assess writing ability (P. Lin, 2005; National Teachers' Association [NTA], 2011; Teng, 2002; TVE Joint College Admissions [TVEJCA], 2011; You et al., 2002).

Accordingly, this section first gives an introduction to the four subtests of the EPS writing test. Past researchers' and writing teachers' opinions on the suitability of the indirect format are then discussed.

Introduction to Question Types of EPS Indirect Writing Assessment

The EPS indirect writing assessment consists of four question types that relate to writing ability (You et al., 2002): topic sentence selection (TSS), sentence insertion (SI), sentence deletion (SD), and sentence rearrangement (SR). TSS requires examinees to select the most appropriate topic sentence for a given passage. In SI, test takers are requested to select the most proper sentence for the blank in a given passage. SD asks students to delete an irrelevant sentence so the remaining sentences of the given passage can all stick to the topic. As for SR, it demands that examinees rearrange five scrambled sentences to make a coherent paragraph.

Among the four item types of the EPS writing test, You, Chang, Joe, and Chi (2002) reported that the most suitable item type for the EPS writing test was SR, followed by SI, TSS, and SD after surveying 24 vocational high school English teachers attending the symposium held by the testing center of the TVE Joint College Entrance Exam. However, SI, according to P. Lin's (2005) study, is the most difficult

item types among the four.

Opinions on Using Indirect Format to Assess Writing Ability in EPS Writing Test

Over the years, researchers and writing teachers have expressed their opinions on the suitability of the testing format. Some approve of the use of indirect writing tests (P. Lin, 2005; NTA, 2011; Teng, 2002; You et al., 2002). Nevertheless, more researchers and teachers disapprove of using multiple-choice items to assess the writing proficiency of students from Department of Applied Foreign Languages (DAFL) (P. Lin, 2005; Teng, 2002; You et al., 2002).

The EPS indirect writing tests are favored by some writing teachers and DAFL students mostly because they think the multiple-choice items could adequately assess examinees' writing competence. For instance, You et al. (2002) noted that over 70% of the 24 English teachers surveyed in the study applauded the use of the objective test. Since the DAFL students rarely received training in English writing, it would be a challenge for them to produce writing in the entrance exam. In addition, the teachers argued that as long as the test items could validly assess the students' basic writing concepts, the indirect measurement of writing ability could be regarded as an appropriate testing format for the students.

P. Lin (2005) also reported that most of her participants regarded indirect writing tests as the most suitable task types to examine their writing proficiency in the entrance exam. Lin administered three different task types—free writing, guided writing, and the objective writing test—to 35 DAFL third-year vocational high school students. A statistically significant difference ($F = 74.44$, $p < 0.01$) was found between the scores on free writing (a 25-minute essay writing), guided writing (a 25-minute picture writing), and the objective writing test (a 20-minute, 10-item multiple-choice test). Post hoc test revealed that the English majors performed the best in the multiple-choice test, followed by the free writing, and the guided writing ($p < 0.01$).

Similar to the empirical results, the questionnaire and interview data indicated that the students considered the multiple-choice writing test the most suitable to be included in the EPS writing test of the TVE Joint College Entrance Exam, and the guided writing task the least suitable.

Although some teachers and students have expressed their assent to the use of the EPS writing test, researchers advise the exam include some easier question types if the EPS writing test continues to adopt the indirect format. Teng (2002) proposed nine question types to be included in the EPS writing test to make the writing entrance exam more valid. The nine question types to replace direct testing of writing ability consisted of sentence correction, sentence paraphrase, sentence transformation, sentence addition, sentence completion, comprehensive test, vocabulary usage, syntactic structure, and punctuation. In You et al.'s (2002) study, teachers recommended grammar correction, punctuation, and word usage. Teachers in NTA (2011) proposed that the EPS multiple-choice tests add grammar choice and error-picking.

In spite of the approval of using the indirect format to assess DAFL students' writing proficiency, the objective tests have met with opposition by more researchers and writing teachers. For example, although most of P. Lin's (2005) participants pointed out that the direct writing tasks should not be added to the EPS writing test of the TVE Joint College Entrance Exam, they confessed it was the free writing that could best assess their writing proficiency. The participants also acknowledged that they preferred to take the objective writing test because they could get higher scores by repeated practice and guessing. Some of the participants even noted that the multiple-choice items could only assess their knowledge about grammar and reading comprehension. For that reason, Lin concluded that due to the present format of the writing assessment, more time would be allotted to practice doing the multiple-choice

items instead of doing the actual writing in the writing classroom. The EPS writing test thus had a negative washback effect on English writing instruction for DAFL students.

After conducting a survey of the opinions of 7 teachers and 36 students on the effect of the EPS writing test on teaching and learning, Teng (2002) also discovered that the EPS indirect writing test had a negative washback effect on the teaching and learning of English writing. From the students' viewpoints, it seemed that the disadvantages of the objective writing test outweighed the advantages. Because indirect measures of compositional skills could only assess the students' analytic reading ability, such as grammar and vocabulary, the EPS writing test should add direct writing components to examine the students' ability of comprehensively expressing themselves in written language.

Furthermore, some teachers in the symposium mentioned in You et al.'s (2002) study still expressed their concern over the EPS objective writing test. They insisted that in addition to the multiple-choice items, direct testing of writing ability also be included in the EPS writing test of the TVE Joint College Entrance Exam. Only when the writing test of EPS required test takers to write could the students cultivate basic writing skills that the indirect assessment intends to measure. If it was difficult for DAFL students to write a complete composition, the direct writing test could consist of easier item types, such as sentence making, paragraph writing or picture writing.

In conclusion, ever since the implementation of the EPS objective writing test, researchers and writing teachers have had contradictory opinions on the suitability of the testing format. Some maintain that the EPS multiple-choice writing test could assess the students' basic writing ability as well as discourse or higher-order writing ability. Yet, others argue that writing tests in the multiple-choice format could not reflect the students' actual writing ability, which can only be gauged by direct writing.

The present study thus aims to inspect the efficacy of the EPS writing test to reflect students' actual compositional ability.

CHAPTER THREE

METHOD

This study aims to examine the correlations between scores on the multiple-choice writing test of the English Professional Subject (EPS) and English performance. This study also determines which subtest of the EPS objective test is more related to the writing ability of the students from Department of Applied Foreign Languages (DAFL). In addition, this study investigates the examinees' opinions on the EPS writing test. This chapter is thus divided into the following four sections: a brief description of the participants, the instruments employed, the procedure of data collection, and the methods of data analysis.

Participants

The sample of the participants in this study was randomly selected from a population of 1,143 third-year DAFL students in 13 commercial vocational high schools in the great Taichung area (Ministry of Education, Department of Statistics [MEDS], 2011). Three schools were at first randomly drawn from the 13 schools. Then, one class within each of the three schools was randomly selected for inclusion in the study. A total of 124 third-year DAFL students were first sampled. Nevertheless, five participants were dropped from the samples because they had taken the EPS multiple-choice writing test before. Hence, as indicated in Table 3.1, a total of 119 students, composed of 17 males and 102 females, participated in the present study.

Table 3.1 Demography of Participants

	No. of Class	No. of Students	Gender	
			Male	Female
School 1	1	50	7	43
School 2	1	28	1	27
School 3	1	41	9	32
Total	3	119	17	102

As can been seen in Table 3.2, most of the participants (60.5%) have learned

English for 7 to 10 years. Some students (29.4%) have learned English for more than

11 years, approximately from preschool age. Few students (10.1%) have received 5 to

6 years of formal English instruction.

Table 3.2 English Learning Experience of Participants

Years	No.	Percent
5-6 years	12	10.1%
7-8 years	23	19.3%
9-10 years	49	41.2%
More than 11 years	35	29.4%

However, in terms of English writing, the students do not have too many

learning experiences (see Table 3.3).

Table 3.3 English Writing Learning Experience of Participants

Years	No.	Percent
None	31	26.1%
Less than 1 year	47	39.5%
1-2 years	28	23.5%
3-4 years	9	7.6%
More than 5 years	4	3.4%

Most of the students (65.6%) have none or less than one year of learning experiences

in English writing. The reasons why the participants do not have enough instruction in

English writing are that one of the participating schools does not have courses of

English Writing and that the other two with English Writing courses do not pay too

much attention to teaching writing due to their tight teaching schedule.

Table 3.4 then illustrates the certificates of the General English Proficiency Test

(GEPT) the participants acquired.

Table 3.4 Acquired GEPT Certificates of Participants

GEPT Certificates	No.	Percent
None	13	10.9%
Elementary (First)	2	1.7%
Elementary (Second)	13	10.9%
Intermediate (First)	55	46.2%
Intermediate (Second)	16	13.4%
High-Intermediate (First)	20	16.8%
High-Intermediate (Second)	0	0%

Over 76% of the participants have acquired the certificate of or higher than the first stage of the intermediate level. Because the participants major in English, their English proficiency levels are higher than those of the students from other departments of the vocational high schools.

Instruments

The instruments employed in the present study included the EPS multiple-choice writing test, the English picture writing task, indirect writing questionnaire (IWQ), and direct writing questionnaire (DWQ). The questionnaires were written both in English and in Chinese. However, the Chinese versions were used to guarantee the participants' full understanding of the questions.

EPS Multiple-choice Writing Test

The EPS multiple-choice writing test from the 2011 academic year was used for the present study. The 2011 edition contains 40 multiple-choice items, divided into five parts: topic sentence selection (TSS), sentence insertion (SI), sentence deletion (SD), sentence rearrangement (SR) and cloze. The examinees need to finish the test within a 100-minute time limit. According to the conference held by National Teachers' Association to comment on the EPS writing test in the 2011 academic year, the test items conform to the objective of the writing test (National Teachers' Association [NTA], 2011). Since the emphasis of the first four sections of the writing

test is to assess students' basic writing ability (You et al., 2002), the first four parts of the 2011 edition were directly employed as the multiple-choice writing test of the current study.

In order to inspect whether the testing constructs of the EPS subtests could represent students' writing ability, the test items and the number of items for each of the four parts remained the same as those of the 2011 EPS multiple-choice writing test. The objective test in the current study was thus composed of 30 multiple-choice items, divided into four subtests: TSS, SI, SD and SR. The number of items was 10, 7, 7, and 6 for each of the four subtests respectively. The study allotted 75 minutes for the participants to complete the test (for the writing test and its answer keys, see Appendix A and B).

English Picture Writing Task

The present study employed picture writing as the direct writing task because DAFL teachers have recommended using picture writing to test their students' English writing proficiency in the EPS writing assessment (You, et al., 2002). For unskilled student writers, it would be easier to write about stories because the pictures can provide a reference point and create a context for examinees to develop their compositions (X. Lin, 2006; Wright, 1989; Wright, 1996).

The English picture writing task used for the current study was directly taken from the 2006 academic year of the writing exam of the Scholastic Aptitude Test (SAT), which requires test takers to describe a series of three related pictures. The 2006 edition has received rave reviews from teachers and students because the creative and detailed pictorial stimulus can evaluate examinees' various writing ability (X. Lin, 2006). The writing task in the current study, in light of the testing instruction of the 2006 edition, required the participants to compose a 100-word passage about the prompts in 30 minutes. Directions were given to call for the students to describe

what was happening in the three-frame picture sequence (see Appendix C).

The present study employed holistic scoring technique in the assessment of the picture writing task in that this scoring technique has won praise from writing assessment researchers. For example, Perkins (1983) noted that if overall writing competence was the aim of direct measure of writing ability, holistic scoring possessed the strongest construct validity among all of the scoring techniques. Moreover, Cooper (1984) also pointed out that holistic scoring was the most valid and direct way to rank-order and select candidates in terms of writing ability.

Since the picture writing was taken from the SAT writing exam, the scoring rubric developed by Joint College Entrance Examination Center and used as the standard to score SAT picture writing was adopted for the holistic scoring for the present study (see Appendix D for Chinese version, and Appendix E for English version). As X. Lin (2009) reported, the holistic scoring was classified into five ranks: very good (19-20 points), good (15-18 points), fair (10-14 points), poor (5-9 points), and very poor (0-4 points). Using the analytic scoring rubric, the two raters awarded a comprehensive score that reflected their overall impression of text quality. They then verified whether the holistic score they had just given corresponded to the scoring scheme. The holistic score was briefly checked by the following five components: content (five points), organization (five points), grammar (four points), vocabulary (four points), and mechanics (two points).

According to Stephenson and Giacoboni (1988), this scoring procedure, "combining the elements of the analytical and holistic scoring methods, provides results that are less subject to the relativistic criticism that pure holistic scoring might elicit" (p.10).

Indirect Writing Questionnaire

IWQ consisted of 13 questions and was divided into two parts: (a) basic

information; (b) questionnaire questions (see Appendix F for English version, and Appendix G for Chinese version). The first part aimed to collect the participants' demographic information, including their sex, their learning experience of English and English Writing, their English proficiency levels, and their previous experiences in taking the 2011 edition of the EPS objective writing test.

As for the second part of the questionnaire, it was intended to elicit the DAFL students' perceptions of the EPS writing test. Questions 1 to 4 asked the students the abilities they applied while doing the four subtests of the EPS writing test respectively. Nine ability items, listed in each of the four questions, were given based on Grabe and Kaplan's (1996) taxonomy of language knowledge of writing. Ability items 1-4 belonged to knowledge at the word and sentence levels, and ability items 6-9 to knowledge at the above-sentence level. Since multiple-choice writing tests are referred to as recognition measures (Breland & Gaynor, 1979; Cooper, 1984), ability item 5 was used to examine whether the participants applied reading comprehension in the assessment of the writing test[1].

Then, the participants were required to number the four question types on a scale of the most difficult to the easiest in Question 5. The students checked the difficulties they ran into while answering the most difficult question type in Question 6. Eight statements of the difficulties the participants might face were listed in this question based on Ackerman and Smith's (1988) indirect writing model. The items all fitted into the reviewing process of the writing framework. Items 1-3 fell into difficulties at the word and sentence levels and items 4-7 into difficulties at the discourse level. The final item was used to investigate whether the participants had difficulty finishing reading the items of the test within time limit.

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[1] The nine items listed in each of Questions 1 to 4 were not numbered in IWQ. Nevertheless, they were specifically referred to in numbers in the presentation of results in Chapter Four. The same situation also happens to Question 6 of IWQ, and to Questions 1 and 2 of DWQ.

The final two questions were meant to collect the participants' views on the indirect writing test. Question 7 brought forth the students' recommended question types for assessing writing indirectly other than the four item types of the EPS writing test. With regard to Question 8, the participants were requested to express their opinions on the appropriateness of the indirect format to examine writing ability.

Direct Writing Questionnaire

In the beginning of DWQ, the participants were asked whether they took the 2006 edition of the SAT picture writing exam before in order to exclude any practice effect.

The main part of the questionnaire included eight questions, aiming to explore the participants' perceptions of the EPS indirect writing test and the picture writing task (see Appendix H for English version, and Appendix I for Chinese version). Question 1 included nine ability items, building on Grabe and Kaplan's (1996) detailed list of writing constructs, to draw forth the abilities undergone by the participants while performing the picture writing task. Items 1-4 were meant to examine whether the students utilized knowledge at the word and sentence levels, whereas items 5-9 were used to inspect knowledge at the above-sentence level.

In Question 2, in light of Ackerman and Smith's (1988) direct writing model, 10 statements of the difficulties the participants might encounter were listed to elicit the difficulties the participants faced in the assessment of the writing test. Items 1, 8, and 9 fell into the planning stage of the cognitive writing process, items 2-7 into the translating stage, and item 10 into the revising stage.

Questions 3 and 4 then aimed to reflect the participants' attitude toward the direct writing task. The students were required to describe whether they liked producing picture writing in Question 3 and to recommend direct writing question types apart from picture writing in Question 4.

The participants' opinions on the comparison between indirect and direct writing tasks were put forward in Questions 5 and 6. Question 5 queried the participants about the writing assessment format they preferred and inquired into the reasons why they liked it. In Question 6, the students were asked to decide which question type was more difficult and to describe the reasons why they thought so.

Questions 7 and 8 were intended to ask the participants their opinions on the EPS writing test of the TVE Joint College Entrance Exam. Question 7 requested the participants to answer whether the EPS writing test of the entrance exam should include English writing. In Question 8, the participants were required to determine which testing format they thought the writing test should adopt.

Procedure

The research procedure of the present study comprised the following five steps, as illustrated in Figure 3.1.
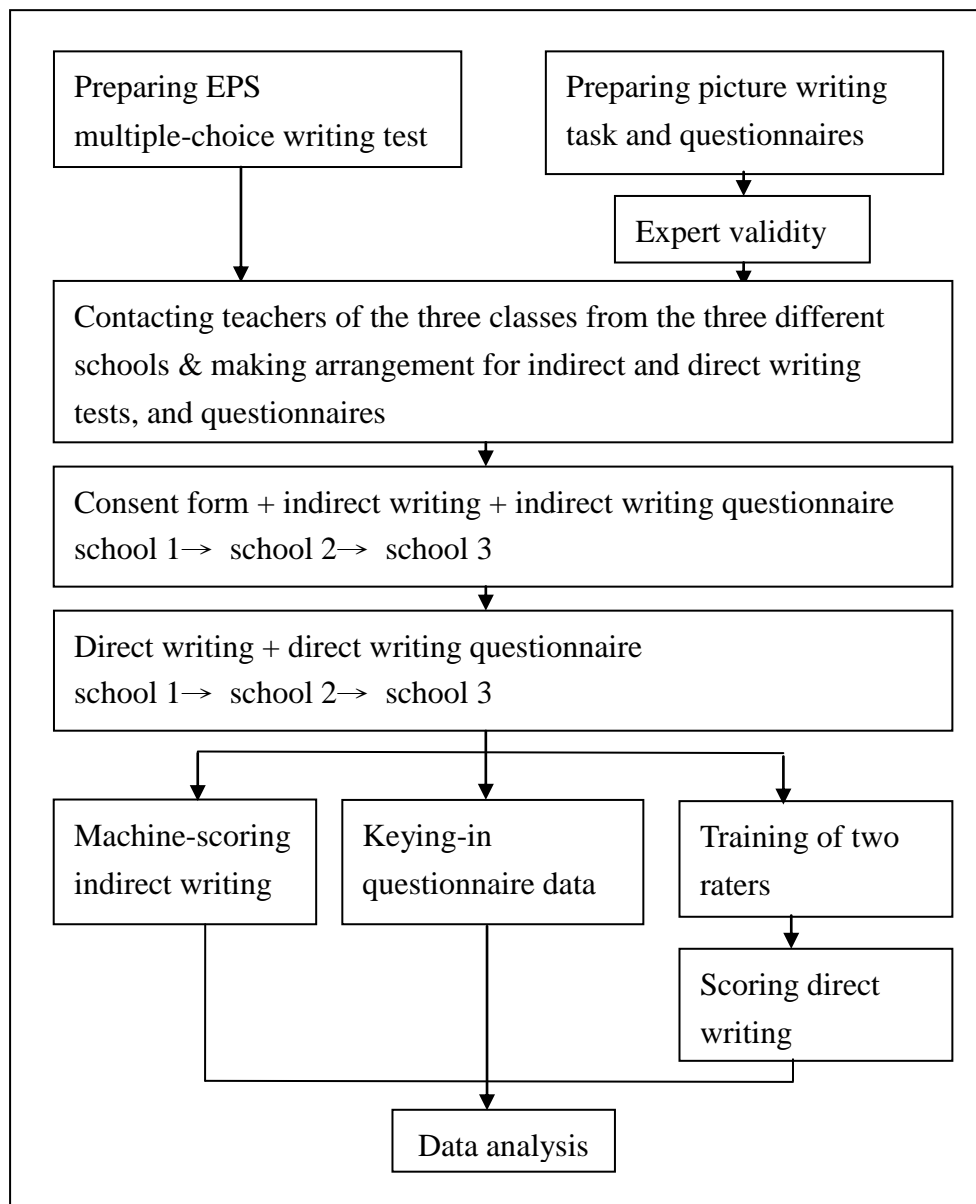
Figure 3.1 Research Procedure of the Study

First of all, the instruments used for the study were prepared. The EPS

multiple-choice objective test was organized and printed. As for the picture writing

task and the questionnaires, they were also prepared and then subjected to expert

judgment. One professor specializing in testing and three experienced vocational high

school English teachers ensured the appropriateness of the writing task for the

proficiency levels of the participants. The questionnaires were reviewed and modified

by a professor, teaching at a university in northern Taiwan and well-versed in theories

of testing. Secondly, the three schools that participated in the study were contacted in order to set the testing schedule. Thirdly, the writing tests and the questionnaires were administered to the participants school by school as scheduled. Fourthly, after the completion of all the tests and questionnaires, all of the data were processed. The multiple-choice writing test was machine-scored. The data of the questionnaires were keyed in. With regard to the direct writing task, two experienced vocational high school English teachers were invited to score the writing samples. One rater has 9-year and the other 16-year teaching experiences. Both have graduate qualifications in Teachers of English to Speakers of Other Languages (TESOL). Training sessions of the two raters were first held. Then, all of the writing samples were scored independently and holistically by them. At last, the resulting raw scores of the direct and indirect writing tests and the data of the questionnaires were used for analysis.

The administration of the indirect and direct tests and the questionnaires was conducted in December in 2011 and in the same manner for each of the three schools. Three periods of English Writing classes were used to implement the study. The first two class periods were devoted to the indirect writing test and IWQ. Before measuring the students, the participants signed consent forms to the research after informed of the purpose of the present study. Then, they took the EPS multiple-choice writing test in 75 minutes. Finally, they filled in IWQ in 10 minutes. One day later, the third class period was used to administer the direct writing task and DWQ. A brief introduction of the task was first provided. The participants were then required to write a passage based on the picture prompts on the picture writing task in 30 minutes. Afterwards, DWQ was administered to the students, who filled it out in 10 minutes.

After the administration of the direct writing task, four training sessions, in light of the thorough training processes reported in Shohamy, Gordon and Kraemer's (1992) and Weigle's (2002) studies, were held in January in 2012. At the beginning of the

training, the purposes and demands of the writing task were introduced. The scoring rubric was then demonstrated with five randomly-selected samples that exemplified the five different ranks in the scoring rubric in the first session. Once the readers got familiarized with the rating scale, another five random selections of the writing samples were given to them in the second session. In this session, they were given a chance to practice scoring the samples. Following this scoring practice was a detailed discussion and negotiation of the ratings they had assigned. The discussion was conducted until they reached an agreement in the assessment of the samples. The third and fourth sessions were undergone with the same procedures using different randomly-selected writing samples.

Right after all of these training, four scoring sessions, building on Breland and Jones' (1982) study, were held. The handwritten samples were randomly divided into four sets. During each scoring session, the two raters scored the sets of the samples independently and holistically without knowing which school the writing came from. Since readers tended to rate lower near the end of a scoring period (Godshalk et al., 1966), the same set of papers was read in reverse order by the second rater. Rest breaks were taken during each scoring session to reduce fatigue and increase reliability (Breland et al., 1987). Moreover, to enhance the reliability of the evaluation, regular monitors were held to ensure graders' consistency in applying the scoring rubric (Breland et al., 1987; Jacobs, et al., 1981; White, 1984). For the few cases in which independent ratings differed by more than five points, a third reader was brought in to resolve discrepancies (X. Lin, 2009).

Data Analysis

The data collected in the study included the scores of the indirect writing test and those of the direct writing task, and the students' opinions generated from the questionnaires.

The first two sets of data were subjected to correlation tests. Since the grading scale for the indirect and direct writing test was different, raw scores were used to do the statistical analysis (The participants' raw scores of the two writing tasks can be found in Appendix J). The total score of the objective test of the present study (30 items) was 75. In other words, the score for each correct item was 2.5, the same as that in the 2011 edition of the EPS writing test of the TVE Joint College Entrance Exam. Therefore, the total scores of each of the four subtests were 25, 17.5, 17.5, and 15, respectively. Raw scores were obtained by counting the number of correct answers on all four subtests.

With the picture writing task, the total score was 20. The scores of the picture writing test were calculated by averaging the scores assigned by both raters to each written product. For the writing samples called for the third reading, the final ratings were the averages based on the two scores in closest agreement. After grading the written texts, the inter-rater reliability was computed to check the degree of agreement between the two independent scorers. Inter-rater reliability coefficient, estimated by Spearman correlation between the independent ratings assigned to the writing samples, was .75 in the current study. The resulting reliability coefficient corresponded to Shohamy's (1985) requirement that two readers involved in scoring writing ability should reach a reliability of .70.

With regard to the last data obtained from IWQ and DWQ, they were categorized and analyzed. The data drawn from the first part of IWQ were used to supplement the description of the participants. The results of the second part of IWQ were to describe the students' perceptions of the EPS indirect writing test. The participants' opinions on the EPS writing test and the picture writing task were represented in DWQ. Both data of the questionnaires were analyzed for frequency and percentage, displayed in tables.

To answer the first research question, Pearson product-moment correlations were calculated between the indirect and direct test scores. Through the examination of the strength of association between the two test scores, the efficacy of the EPS multiple-choice writing test to reflect the participants' overall writing ability can be revealed. To answer the second research question, Pearson product-moment correlations were computed between the scores of the four subtests of the objective test and those of the direct writing test separately. By so doing, we could know which subtests of the EPS objective test could best reflect the students' writing ability. To answer the third research question, descriptive statistics were used to delineate the abilities the participants applied and the difficulties they bumped into while taking the two writing tasks. Information about their perceptions of the two task types and of the EPS writing test of the TVE Joint College Entrance Exam was also provided to answer the third research question.
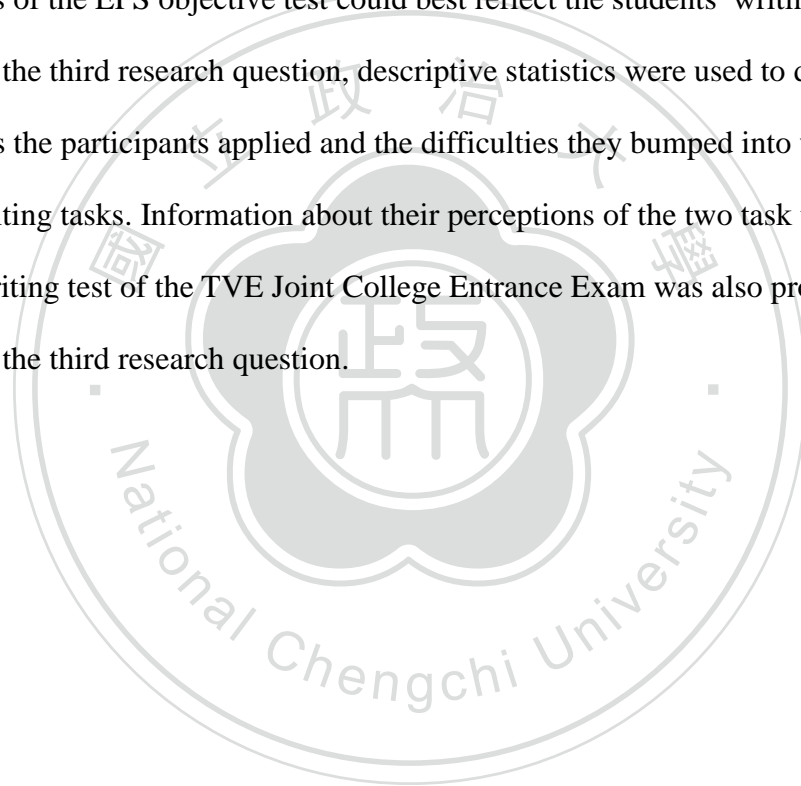
CHAPTER FOUR

RESULTS AND DISCUSSION

In this chapter, the results are discussed in response to the three research questions of the present study. The first section answers the first research question, presenting the correlation between the scores of the multiple-choice writing test of the English Professional Subject (EPS) and those of the picture writing task. In the second section, correlations between the four item types of the EPS indirect writing test and the picture writing task are illustrated in reply to the second research question. The third section describes the participants' perceptions of the two writing tasks in answer to the third research question.

Correlation between EPS Multiple-choice Writing Test

and Picture Writing Task

The section reports the correlation between the 119 participants' performances in the EPS multiple-choice writing test and in the picture writing task. The objective writing test, containing 30 items, was directly taken from the 2011 edition of the EPS writing test of the Technological and Vocational Education (TVE) Joint College Entrance Exam. The direct writing task was drawn from the 2006 edition of the picture writing test of Scholastic Aptitude Test (SAT) that required the participants to write a 100-word passage on the basis of the three-frame picture sequence.

The multiple-choice writing test with a total score of 75 was machined-scored, while the picture writing task was scored holistically by the two raters on the 20-point scale. Since the two writing tasks were scored within different frameworks, raw scores were used in the analysis of data.

Table 4.1 demonstrates the descriptive statistics of the raw scores for the EPS indirect writing test and for the picture writing task.

Table 4.1 Descriptive Statistics of EPS Multiple-choice Writing Test and Picture
          Writing Task

Task Type	N	Lowest Score	Highest Score	M	SD	Total Score
Multiple Choice	119	7.5	62.5	41.68	11.35	75
Picture Writing	119	1	19	12.35	2.77	20

The researcher then used the raw scores (see Appendix J for details of the raw data) to

calculate the correlation between the two writing tasks. A correlation of .58 ($p < .01$)

was thus attained. Based on Wu and Tu (2009), the significant correlation of .58

suggests that the two writing tasks exhibit positive correlation at the mid level.

The coefficient of correlation is of the same general magnitude as that reported

in previous studies (Breland & Gaynor, 1979; Breland & Jones, 1982; Godshalk et al.,

1966; Hogan & Mishler, 1980). The correlational result might be attributed to the fact

that the EPS multiple-choice writing test is intended to measure writing ability (P. Lin,

2005; National Teachers' Association [NTA], 2011; You et al., 2002). As Godshalk,

Swineford, and Coffman (1966) state, "When objective questions specifically

designed to measure writing skills…, they prove to be highly valid" (p. 40). In

particular, the indirect writing test focuses on examining organizational ability of

writing. According to Benton and Kiewra (1986), writing measures are more

significantly correlated with performances in direct writing when they aim to assess

organizational ability.

The result further indicates that although the writing test takes the form of

multiple choices, it is of some value to the writing assessment of the students from

Department of Applied Foreign Languages (DAFL). Now that the indirect writing test

is moderately correlated with direct writing, it lends support to the assumption that the

students' writing ability could, in some way, be assessed by the objective writing test.

Hence, indirect writing tests might be an alternative way in the large-scale writing test

if direct tests are not feasible due to practical constraints.

Correlations between Four Item Types of EPS Multiple-choice Writing Test

and Picture Writing Task

The correlations between the scores of the participants in the four item types of the EPS multiple-choice writing test and in the picture writing task are discussed in this section. The four item types included topic sentence selection (TSS), sentence insertion (SI), sentence deletion (SD), and sentence rearrangement (SR). The number of items for each of the four item types was 10, 7, 7, and 6, respectively. Since not all the total scores of the four item types were the same, raw scores were used in the data analysis.

The descriptive statistics of the raw scores for the four item types are presented in Table 4.2.

Table 4.2 Descriptive Statistics of Four Item Types of EPS Multiple-choice Writing Test

Item Type	N	Lowest Score	Highest Score	M	SD	Total Score
TSS	119	2.5	25	12.40	4.89	25
SI	119	0	17.5	10.84	4.00	17.5
SD	119	2.5	17.5	10.57	3.83	17.5
SR	119	0	15	7.88	3.23	15

The raw scores (see Appendix J for details of the raw data) were then drawn on to calculate the correlations between the subtests in the EPS multiple-choice writing test and the picture writing task.

Table 4.3 then indicates the correlations between the 119 participants' raw scores on the four items types and on direct writing.

Table 4.3 Correlations between Subtests of EPS Multiple-choice Writing Test and
Picture Writing Task ($N = 119$)

Subtest	r	Rank
SI	.52**	1
SD	.51**	2
SR	.38**	3
TSS	.27**	4

** $p < .01$

SI correlated moderately ($r = .52$) with the picture writing holistic score, as did SD ($r = .51$). In contrast, SR did not correlate nearly as well ($r = .38$), nor did TSS ($r = .27$). The difference in the degree of the correlations was significant at the .01 level.

In Wu and Tu's (2009) opinion, the correlation coefficients derived from scores on TSS and on SR with essay total score belong to correlations at the low level. The result of TSS may be attributed to the fact that TSS is intended more to assess examinees' reading ability. The ability to pick the main idea for the passage might not entail the ability to actually produce a topic sentence. As for SR correlation result, it is in accordance with those from previous research (Benton & Kiewra, 1986; Godshalk et al., 1966). Godshalk et al. (1966) proved that SR, intended to assess examinees' ability of rearranging grammatical patterns, lacked concurrent validity as a measure of composition skills.

The results of SI and SD, mid correlation in Wu and Tu's (2009) classification, are in agreement with those of Godshalk et al. (1966) and of Breland and Jones (1982). The substantial correlations would be expected, given that the purpose of the two subtests is to assess the participants' concepts of text structure and coherence (Breland & Jones, 1982; Godshalk et al., 1966). As Yu (2007) notes, understanding discourse organization may contribute to the acquisition of writing ability.

Judging from the correlational results, among the four subtests, SI and SD could be relied on as a better indication of the DAFL students' actual writing proficiency.

Nevertheless, TSS and SR, due to the low correlations, would be less appropriate to evaluate the students' writing ability.

Perceptions of EPS Multiple-choice Writing Test and Picture Writing Task

In this section, the results of the questionnaires about the participants' perceptions of the indirect and direct writing tasks are classified into four subsections: (a) abilities the participants applied in the two writing tasks; (b) difficulties they faced in the two writing tasks; (c) perceptions of the two types of writing tasks; (d) perceptions of the EPS multiple-choice writing test of the TVE Joint College Entrance Exam.

Abilities Participants Applied in Indirect and Direct Writing Tasks

The results of the second part of indirect writing questionnaire (IWQ) (Q1-Q4) and those of direct writing questionnaire (DWQ) (Q1) are reported in order to find out the abilities the participants applied while taking the EPS multiple-choice writing test and the picture writing task, respectively. This subsection first deals with the results of the indirect writing test, then with those of the direct writing task.

In an attempt to elicit the abilities applied by the participants in the EPS indirect writing test, nine ability items, based on Grabe and Kaplan's (1996) taxonomy of language knowledge of writing, were given in each of the four questions of IWQ. The nine ability items included (1) recognizing punctuation; (2) understanding words; (3) recognizing phrases; (4) applying grammar knowledge; (5) applying reading comprehension ability; (6) recognizing cohesive devices; (7) finding main ideas; (8) establishing coherence in contexts; (9) applying the concept of discourse structure. Items 1-4 belonged to knowledge at the word and sentence levels and Items 6-9 to knowledge at the above-sentence level. Item 5 was intended to investigate the role reading comprehension played in the multiple-choice writing test.

Table 4.4 indicates the rank order of the abilities the participants ($N = 119$) used to complete the EPS objective writing test.

Table 4.4 Rank order of Abilities Participants Used to Take EPS Multiple-choice
Writing Test (*N* = 119)

Ability	Frequency	Percent	Rank
TSS			
Establishing coherence in contexts	96	80.7%	1
Applying reading comprehension ability	90	75.6%	2
Understanding words	84	70.6%	3
Finding main ideas	83	69.7%	4
Applying the concept of discourse structure	61	51.3%	5
Recognizing phrases	41	34.5%	6
Recognizing cohesive devices	41	34.5%	6
Applying grammar knowledge	18	15.1%	8
Recognizing punctuation	12	10.1%	9
SI			
Establishing coherence in contexts	112	94.1%	1
Applying reading comprehension ability	94	79.0%	2
Understanding words	73	61.3%	3
Applying the concept of discourse structure	64	53.8%	4
Finding main ideas	61	51.3%	5
Recognizing cohesive devices	58	48.7%	6
Recognizing phrases	36	30.3%	7
Applying grammar knowledge	28	23.5%	8
Recognizing punctuation	16	13.4%	9
SD			
Establishing coherence in contexts	99	83.2%	1
Applying reading comprehension ability	97	81.5%	2
Understanding words	66	55.5%	3
Finding main ideas	58	48.7%	4
Applying the concept of discourse structure	58	48.7%	4
Recognizing phrases	38	31.9%	6
Recognizing cohesive devices	38	31.9%	6
Applying grammar knowledge	18	15.1%	8
Recognizing punctuation	6	5.0%	9
SR			
Establishing coherence in contexts	111	93.3%	1
Applying reading comprehension ability	88	73.9%	2
Applying the concept of discourse structure	73	61.3%	3
Recognizing cohesive devices	64	53.8%	4
Understanding words	57	47.9%	5
Finding main ideas	49	41.2%	6
Recognizing phrases	39	32.8%	7
Applying grammar knowledge	33	27.7%	8
Recognizing punctuation	14	11.8%	9

The most frequently utilized ability, over 80.7% in all of the four item types, was establishing coherence in contexts. Applying reading comprehension ability was the second frequently used ability (over 73.9% in all of the four subtests). Two additional abilities—applying the concept of discourse structure and understanding words (over 48.7% and 47.9% in all of the subtests, respectively)—were perceived as being the next most frequent abilities used by the participants. It seems that the students draw on similar abilities in taking the four subtests and that they make use of more knowledge at the above-sentence level than knowledge at the word and sentence levels in the indirect writing test.

In the previous studies, researchers have noted that more sentence-level knowledge is used by examinees in indirect writing tests (Ackerman & Smith, 1988; Breland & Jones, 1982; Chang, 2003; Cooper, 1984). Nonetheless, the result of the present study indicates that the participants capitalize more on knowledge at the above-sentence level in the EPS indirect writing test. As P. Lin (2005), NTA (2011), You, Chang, Joe, and Chi (2002) find out, the EPS multiple-choice writing test is designed to assess the students' concepts of discourse structure. Accordingly, when teachers instruct the students how to cope with the writing entrance exam, they tend to require the students to look at the test items from the angle of discourse structure. The students, in this regard, are trained to consciously apply their knowledge at the discourse organizational level in taking the objective writing test.

Although the indirect writing tests were intended to assess the participants' writing knowledge, over 73.9% of the students applied reading comprehension ability for each of the four subtests. The result is consistent with the findings of previous research (Cooper, 1984; P. Lin, 2005; Teng, 2002) that in addition to the targeted writing skills, the format of multiple-choices may call for examinees' reading skills. As Hughes (2003) points out, the construct validity of the indirect writing test is thus

under threat because it involves abilities other than what it has aimed to assess.

Then, in the picture writing task, Question 1 of DWQ itemized nine abilities, also based on Grabe and Kaplan's (1996) taxonomy, to elicit the abilities the participants utilized. The nine abilities consisted of: (1) applying punctuation knowledge; (2) applying previously-learned words; (3) applying previously-learned phrases; (4) applying grammar knowledge; (5) using connectives to connect sentences; (6) applying the concept of topic sentences; (7) using supporting sentences to support main ideas; (8) applying the concept of coherence in contexts; (9) applying the concept of discourse structure. Items 1-4 were classified into knowledge at the word and sentence levels, while items 5-9 into knowledge at the above-sentence level.

The rank order of abilities the participants applied in taking the picture writing task is displayed in Table 4.5.

Table 4.5 Rank order of Abilities Participants Used to Take Picture Writing Task
($N = 119$)

Ability	Frequency	Percent	Rank
Applying previously-learned words	98	82.4%	1
Applying grammar knowledge	93	78.2%	2
Using connectives to connect sentences	88	73.9%	3
Applying the concept of coherence in contexts	80	67.2%	4
Applying punctuation knowledge	67	56.3%	5
Applying previously-learned phrases	39	32.8%	6
Applying the concept of discourse structure	24	20.2%	7
Applying the concept of topic sentences	23	19.3%	8
Using supporting sentences to support main ideas	23	19.3%	8

In the picture writing task, applying previously-learned words was referred to most frequently, followed by applying grammar knowledge. Both of the two abilities were over 78.2%. Furthermore, using connectives to connect sentences (73.9%) and applying the concept of coherence in contexts (67.2%) were the next two frequently used abilities in the direct writing task. The results reveal that the students draw more

on knowledge at the word and sentence levels in the picture writing task.

The result is in sharp contrast to the findings of the previous studies (Ackerman & Smith, 1988; Breland & Jones, 1982; Chang, 2003; Cooper, 1984) that knowledge at the discourse organizational level is applied more in direct writing tasks. Nevertheless, in the present study, the participants utilized more knowledge at the word and sentence levels in the picture writing task. The results may be explained by the following two possible reasons. First, the students do not know how to apply discourse-level knowledge in doing the direct writing task. Because the EPS writing test takes the form of multiple choices, many writing teachers simply slash time on actual writing. They may even follow the traditional teaching approach to English composition—concentrating primarily on grammar analysis and vocabulary teaching (D. Chen, 1998; H. Chen, 2001; Yu, 2007). The participants are thus deprived of the opportunities to learn how to write a unified and coherent passage. As might be expected, the students, less proficient in the target language and inexperienced in composing direct writing, simply stay at the word and sentence levels while doing the picture writing task. Second, the students do not realize that their knowledge at the discourse level also contributes to their composing the direct writing task. Teachers, due to the present testing format, devote most of their class hours to teaching grammar and word usage. The students may thus get a message that putting all grammatically correct sentences together could entail good writing (H. Chen, 2001). For that reason, the students perceive that it is their writing knowledge about vocabulary and grammar that helps them in the process of composing the picture writing. But actually they may draw on their discourse-level knowledge to complete the writing task unconsciously.

Comparing the abilities utilized by the participants in the two writing tasks, it is found that the students yield different profiles of writing ability in the two writing

tasks. Both of the writing measures demand the students to demonstrate their knowledge of words and concepts of coherence. Nonetheless, taking a close look at the rank orders of the abilities the participants used in the two writing tasks, the researcher notices that the most frequently used abilities in one writing task are placed last in the other. For instance, the participants capitalize on grammar knowledge most to complete the picture writing task, whereas knowledge of grammar is in almost the last place in the multiple-choice writing test. In addition, the knowledge of main ideas is drawn on more in the indirect writing test, while it is used the least in the direct writing task.

In sum, it is evident that the two approaches render unique information about the participants' writing ability profiles. Consequently, depending solely on one writing approach to examine the students' writing competence might not fully assess the abilities required in the assessment of writing.

Difficulties Participants Faced in Indirect and Direct Writing Tasks

Questions 5 and 6 of the second part of IWQ and Question 2 of DWQ are about the difficulties undergone by the participants while taking the EPS indirect writing test and the picture writing task, respectively. Thus, this subsection first outlines the difficulties the participants came across in the EPS multiple-choice writing test, followed by the ones they had in the picture writing task.

Question 5 of IWQ requires the participants to determine the difficulty levels of the four item types on a scale of 1 (the most difficult) to 4 (the easiest). In data analysis, responses were assigned point values from the most difficult (4 points) to the easiest (1 point). Therefore, the higher means an item type obtained, the more difficult it was. As indicated in Table 4.6, the most difficult item type recognized by the participants ($n = 115$) was TSS ($M = 3.28$), followed by SI ($M = 2.88$), SD ($M = 2.15$), and SR ($M = 1.70$).

Table 4.6 Difficulty Levels for Subtests of EPS Multiple-choice Writing Test
(n = 115)

Subtest	M	Rank
TSS	3.28	1
SI	2.88	2
SD	2.15	3
SR	1.70	4

The participants were then required to confirm the difficulties they encountered while answering the most difficult item type in Question 6 of IWQ. Eight statements of the difficulties they might face, in light of Ackerman and Smith's (1988) indirect writing model, were listed in the question as follows: (1) do not understand the meaning of the words; (2) do not understand the meaning of the phrases; (3) do not understand the meaning of the sentences; (4) do not know which cohesive devices to use; (5) cannot find out main ideas; (6) cannot find out coherence in contexts; (7) cannot understand the meaning of the passage; (8) cannot finish reading the items within time limit. All of the eight items were categorized into the reviewing process of the writing model. Items 1-3 were intended to examine difficulties at the word and sentence levels and items 4-7 at the discourse level. The last item was used to investigate whether the participants had trouble finishing reading the stems within time limit.

The rank order of the difficulties the participants encountered in taking the EPS multiple-choice writing test is shown in Table 4.7.

Table 4.7 Rank Order of Difficulties Participants Encountered to Take EPS

       Multiple-choice Writing Test

Difficulty	Frequency	Percent	Rank
TSS ($n = 66$)			
Do not understand the meaning of the words	44	66.7%	1
Cannot find out main ideas	43	65.2%	2
Cannot understand the meaning of the passage	38	57.6%	3
Do not understand the meaning of the sentences	37	56.1%	4
Cannot find out coherence in contexts	34	51.5%	5
Cannot finish reading the items within time limit	32	48.5%	6
Do not understand the meaning of the phrases	23	34.8%	7
Do not know which cohesive devices to use	8	12.1%	8
SI ($n = 24$)			
Do not understand the meaning of the words	18	75.0%	1
Cannot find out main ideas	14	58.3%	2
Cannot find out coherence in contexts	14	58.3%	2
Cannot understand the meaning of the passage	13	54.2%	4
Do not understand the meaning of the sentences	11	45.8%	5
Cannot finish reading the items within time limit	11	45.8%	5
Do not know which cohesive devices to use	8	33.3%	7
Do not understand the meaning of the phrases	6	25.0%	8
SD ($n = 16$)			
Cannot find out coherence in contexts	12	75.0%	1
Do not understand the meaning of the words	9	56.3%	2
Do not understand the meaning of the sentences	8	50.0%	3
Cannot finish reading the items within time limit	8	50.0%	3
Cannot understand the meaning of the passage	6	37.5%	5
Cannot find out main ideas	4	25.0%	6
Do not understand the meaning of the phrases	2	12.5%	7
Do not know which cohesive devices to use	2	12.5%	7
SR ($n = 9$)			
Cannot find out coherence in contexts	7	77.8%	1
Cannot understand the meaning of the passage	6	66.7%	2
Do not understand the meaning of the words	5	55.6%	3
Cannot find out main ideas	4	44.4%	4
Do not understand the meaning of the sentences	3	33.3%	5
Do not know which cohesive devices to use	2	22.2%	6
Do not understand the meaning of the phrases	1	11.1%	7
Cannot finish reading the items within time limit	1	11.1%	7

For each of the subtests in the indirect writing test, the participants had more difficulties understanding the meaning of the words and finding out coherence in contexts. The two appear to bother the participants the most for they were with quite high frequency (over 55.6% and 51.5% in all of the four subtests, respectively).

The students' difficulty in understanding the meaning of the words may be explained by the participants' insufficient vocabulary size (H. Chen, 2001; P. Lin, 2005). Because they are lacking in vocabulary, they could not use guessing word meaning from contexts to facilitate their understanding of the word because the contexts are also unfamiliar to them. That's why they feel it difficult to understand word meaning in the indirect writing test. As for the difficulty of figuring out coherence in texts, the reason may be that the students have not received enough training in the concept. To figure out coherence in contexts, the students need to activate knowledge of difficult domains at the same time, such as vocabulary, grammar, the logic of idea development, and the relation between form and function. Nevertheless, due to the present indirect testing format, teachers may devote more teaching hours to reading comprehension instead of the concept of coherence.

Then, in the picture writing task, Question 2 of DWQ was used to find out the difficulties the participants encountered. In the question, 10 statements of the difficulties were given according to Ackerman and Smith's (1988) direct writing model. The 10 statements included: (1) do not know what to write; (2) cannot find the right word to use; (3) cannot spell the words; (4) do not know how to apply the words; (5) cannot transform thoughts into sentences; (6) cannot find the right sentence pattern to use; (7) do not know how to use connectives; (8) cannot organize ideas into a paragraph; (9) do not know how to increase coherence between paragraphs; (10) do not know how to revise. Items 1, 8, and 9 belonged to the planning process of the

direct writing framework, items 2-7 to the translating process, and item 10 to the

reviewing process.

Table 4.8 displays the rank order of the difficulties experienced by the

participants ($N = 119$) in the picture writing task.

Table 4.8 Rank Order of Difficulties Participants Encountered to Take Picture Writing
          Task ($N = 119$)

Difficulty	Frequency	Percent	Rank
Cannot find the right word to use	76	63.9%	1
Cannot transform thoughts into sentences	68	57.1%	2
Cannot organize ideas into a paragraph	67	56.3%	3
Cannot spell the words	66	55.5%	4
Do not know how to increase coherence between paragraphs	61	51.3%	5
Cannot find the right sentence pattern to use	47	39.5%	6
Do not know how to apply the words	43	36.1%	7
Do not know what to write	29	24.4%	8
Do not know how to use connectives	29	24.4%	8
Do not know how to revise	28	23.5%	10

Among the three most frequently mentioned difficulties (all exceeding 56.3%), the

students had more troubles in the translating process (finding the right word to use,

and transforming thoughts into sentences) than in the process of planning (organizing

ideas into a paragraph).

The results confirm that unskilled writers have more difficulties at the word

level in the translating processes (D. Chen, 1998; H. Chen, 2001; Raimes, 1985).

Several researchers have drawn a conclusion that once student writers are scanty of

instruction and practice in writing, they might not build up sufficient working

vocabulary they need to present ideas (H. Chen, 2001; Raimes, 1985; Witte & Faigley,

1981). Thus, they may face the challenge of finding the right word to express their

meaning.

Although unskilled writers have also shown their weaknesses during the

planning process in the literature (H. Chen, 2001; P. Lin, 2005; Raimes, 1985), the results of the present study seem to contrast with those in the previous research. The participants of the study appear to have fewer problems in the planning processes. According to Raimes (1987), the unskilled student writers, restricted by their lower language proficiency levels, tend to plan little in the writing process. In addition, it is possible that the picture prompts, providing a reference point and creating a context for writing (X. Lin, 2006; Wright, 1989; Wright, 1996), facilitate the students in the process of planning. X. Lin (2006) claimed that students could write a coherent passage simply based on their imagination or their interpretation of the three-frame picture sequence of the writing task.

Furthermore, it appears that the students do not run into too many difficulties in the reviewing process. The result is in agreement with the findings of Godshalk et al. (1966) and of Raimes (1987). Under test conditions, the students might not have too much time on reviewing and revising (Godshalk et al., 1966). Moreover, since the students tend to monitor each sentence they write carefully before they put it down on paper (He, 2001; Raimes, 1987), they might not have too many problems in reviewing what they have written.

Perceptions of Two Types of Writing Tasks

In this subsection, the second part of IWQ (Q7-Q8) and DWQ (Q3-Q6) are discussed to reflect the participants' perceptions of the two types of writing tasks, which are grouped into the following three sub-subsections: (a) indirect writing task; (b) direct writing task; (c) comparison between indirect and direct writing tasks. In the following sub-subsections, the participants' written opinions toward the writing tasks were first organized and analyzed and then the responses most frequently put forth were cited when relevant to the questionnaire question under discussion.

Indirect writing task. The participants' views on the indirect writing task are

54

elicited in Questions 7 and 8 of IWQ. In Question 7, the students were required to

recommend item types for indirect writing tests. As presented in Table 4.9, all of the

item types were not strongly recommended by the students (below 31.1%). It seems

that the students tend not to suggest item types for assessing writing indirectly.

Table 4.9 Recommended Item Types for Indirect Writing Test ($N = 119$)

Recommended Item Type	Frequency	Percent	Rank
Sentence Paraphrase	37	31.1%	1
Grammar Choice	33	27.7%	2
No Suggestions	32	26.9%	3
Word Usage	29	24.4%	4
Error-picking	25	21.0%	5
Sentence Completion	24	20.2%	6
Cloze	23	19.3%	7
Sentence Transformation	22	18.5%	8
Sentence Addition	22	18.5%	8

The reasons for the low frequency of recommended item types for indirect

writing tests may lie in the fact that the participants, simply judging from the name of

the item types, may not understand what the items are for. Furthermore, it is likely

that the participants have practiced the four subtests of the past EPS multiple-choice

writing tests of the entrance exam repeatedly (P. Lin, 2005). Consequently, they are

quite familiar and satisfied with the original item types.

Question 8 was then to examine the appropriateness of the indirect format to

assess the participants' English writing ability. For the question ($n = 118$), the result

showed that 66 students (55.5%) were in support of the indirect format. They consider

the indirect format proper because of the following three reasons. First, it is more

convenient and effortless to take the indirect writing test because they could just

finish the multiple choices by picking up the answer from the four alternatives. Then,

it is much more time-saving to take multiple choices than to produce an essay. They

could thus complete the writing test within time limit. Third, the EPS multiple-choice writing test contain diverse item types, which could help develop their writing concepts and train their writing abilities at various levels. The abilities or skills that could be honed or increased through taking the subtests of the indirect writing test include (a) logical thinking; (b) reading comprehension; (c) reading speed; (d) discourse structure; (e) vocabulary size.

Nonetheless, the indirect format was not favored by 52 students (43.7%) as an instrument to assess their competence in English writing. They think multiple choices, which aim to examine reading comprehension, could not comprehensively reflect their real competence in English writing. In addition, some writing abilities or skills could only be assessed with direct writing, namely thought development, and application of writing concepts and skills. Most importantly, for them, the ability to recognize items does not entail the capability of producing actual writing.

Direct writing task. The results of Questions 3 and 4 of DWQ are reported to illustrate the participants' perceptions toward the direct writing task. In Question 3, the students were asked if they liked doing the picture writing task. Among the overall sample ($n = 117$), 76 students (63.9%) said yes. According to the written responses, they find the picture prompts helpful. For them, the pictorial stimulus could serve as a frame of reference for writing, so they could develop their story within a context of direction. Besides, the coherent and entertaining three-frame picture sequence could help stir their creativity and imagination.

Although most of the participants preferred the picture writing task, there were 41 (34.5%) students holding different views. They think their idea development is restricted to the picture prompts. They also express that it is troublesome to do the actual writing because they have to take notice of all aspects of writing, such as punctuation, vocabulary, phrases, grammar, cohesion, coherence, and paragraph

structure, in the process of writing. Some of them even state that they do not know

how to compose the writing task simply because they have not received any

instruction in English writing before.

Question 4 required the participants to recommend item types for direct writing

tests. As displayed in Table 4.10, essay writing (42.9%) stood out as recommended

item type for assessing direct writing.

Table 4.10 Recommended Item Types for Direct Writing Test ($n = 118$)

Recommended Item Type	Frequency	Percent	Rank
Essay Writing	51	42.9%	1
Translation	38	31.9%	2
No Suggestions	30	25.2%	3
Sentence Making	29	24.4%	4

The result corresponds to the findings of H. Chen (2001) and of You et al.

(2002). The reason why essay writing is favored by the students is that this type of

writing would not impose restrictions on their idea development.

Comparison between indirect and direct writing tasks. Questions 5 and 6 of

DWQ survey the students' opinions on the comparison between the two writing tasks.

Question 5 made an inquiry about the writing task they preferred to perform. It was

shown that multiple choices won the support of 66 (55.5%) among the 115 valid

samples. The students favor multiple-choice writing test because all they have to do is

passively decode the meanings of the stems. They do not have to think about what to

write and to worry about whether the sentences they create stick to grammar rules and

paragraph structure. Most important of all, they could get scores by guessing or

inferring from the items even if they could not figure out the answer.

Nevertheless, picture writing was still favored by 49 students (41.2%). They

like picture writing because they think the format of direct writing could better assess

their English writing proficiency. Moreover, they could write down their own

thoughts at will without being confined to the directions of the stems created by the examiners.

In Question 6, the participants were inquired about the writing task that they thought was more difficult. Multiple-choice writing test was more difficult to 58 students (48.7%) and picture writing task was more difficult to 57 (47.9%). It seems that the two writing tasks are almost of equal difficulty to the participants. The results are in sharp contrast to the findings of P. Lin (2005) and of Stephenson and Giacoboni (1988) that multiple choices are easier than direct writing.

In the present study, the participants give different reasons for considering the two writing tasks more difficult. The following four reasons explain why they regard multiple-choice writing test as more difficult. Firstly, they simply could not understand the items written by others. Secondly, they would get confused by trick distracters. Thirdly, some items are used to assess the ins and outs of grammatical rules. Finally, they are unable to cope with the test owing to insufficient vocabulary size. In regard to the reasons why the participants recognize picture writing as more difficult, they reply that to finish the task, they have to be equipped with better English knowledge and ability of writing. Therefore, they have to count all on themselves, not on guessing, during the writing process.

Perceptions of EPS Multiple-choice Writing Test of TVE Joint College Entrance Exam

Questions 7 and 8 of DWQ investigate the participants' perceptions on the EPS multiple-choice writing test of the TVE Joint College Entrance Exam. In Question 7, the participants were asked whether the EPS writing test should include direct writing. Sixty-one (51.3%) of the participants ($n = 114$) thought the entrance exam should not adopt English writing in the EPS writing test, while 53 (44.5%) concurred with the use of direct writing. Question 8 further inquired into the participants' preferred

testing format. The result showed that 57 students (47.9%) stood for multiple choices, 44 (37%) for multiple choices plus picture writing, and 14 (11.8%) for picture writing.

From the findings, it is suggested that more students tend to maintain the original format of the EPS writing test of the TVE Joint College Entrance Exam. One possible explanation is that the students are familiar with the present indirect format. Since the students get accustomed to doing the multiple choices through repeated practice of the past exams, they might feel much more comfortable with the indirect format. Furthermore, the results may be explained by the fact that the students think they might get higher grades by guessing if assessed by the format of multiple choices. Finally, deficient writing experiences and instruction make them assume that direct writing is insurmountable under time constraints. They are afraid that they might not be able to perform actual writing so they would like to stick to the original format.

Nonetheless, based on the findings of the present study and the results of the previous research, the objective writing test still has its drawbacks as the one and only assessment to measure the students' exact competence in English writing. The first drawback is that the examinees could not demonstrate their full range of writing abilities in the assessment of writing. If assessed only by the multiple choices, the abilities of producing written texts could never be tested (Ackerman & Smith, 1988; Breland & Jones, 1982; Carlson et al., 1985; Chang, 2003; Cooper, 1984; Quellmalz et al., 1982; Stephenson & Giacoboni, 1988; Stiggins, 1981). Moreover, the indirect writing test cannot be used exclusively because of its shaky construct validity. From the writing literature (Cooper, 1984; P. Lin, 2005; Teng, 2002) and the questionnaire findings of the study, it is clear that the multiple-choice writing test involves reading comprehension abilities. The indirect writing test is somehow invalid because it measures abilities other than the ones it aims to assess. The third drawback concerns the potential error of score reliability of the indirect writing test. According to the

findings of the questionnaires and of the previous studies (Breland & Gaynor, 1979; P. Lin, 2005; Moss et al., 1982; Stiggins, 1981; Teng, 2002; Ward et al., 1980), the indirect format might involve examining the students' luck in guessing. Finally, the writing test in the form of multiple choices might have a harmful backwash effect on writing instruction (Hughes, 2003; P. Lin, 2005; Teng, 2002; Weir, 2005). Obviously, writing instruction would be driven by the format of the writing entrance exam. If the EPS writing test only measures the students' writing proficiency by multiple-choice items, DAFL writing teachers will not ask their students to practice writing compositions, and the students would never understand the importance of direct writing. The students' abilities of expressing themselves in written language would thus deteriorate.

Apparently, we cannot count solely on the indirect writing test to examine the students' writing ability; however, if we resort entirely to direct writing in the writing entrance exam, the following two disadvantages could arise. First of all, the writing samples obtained from one single test might not be enough to fully indicate the students' writing competence (Hughes, 2003). In a direct writing exam, examinees are usually required to compose at most one to three passages. The limited writing samples thus cannot represent all kinds of different writing abilities. Next, it would bring about comparatively higher scoring cost if we only use direct writing to assess the students' competence in writing (Ackerman & Smith, 1988; Breland & Gaynor, 1979; Cooper, 1984; Stiggins, 1981).

Consequently, it is suggested that the EPS writing test of the TVE Joint College Entrance Exam should administer the indirect test in tandem with direct writing assessment based on the literature of writing assessment and the research findings of the present study. The combined measure could bring the following three advantages. First, the combined measure could better approximate to the examinees' real

competence in writing. In the literature, researchers have proved that the combined measure could yield higher correlations with direct writing (Breland & Jones, 1982; Godshalk et al., 1966). Second, the combined measure could not only help the EPS writing test of the TVE Joint College Entrance Exam retain its practicality, but enhance its validity and authenticity (Bachman & Palmer, 1996). In real life, reading comprehension and writing are connected and almost inseparable. If the indirect writing test (reading comprehension) and the direct writing task (writing) are put together, the writing measure could reflect authentic language use in real life. Finally, the combined measure could exhibit a positive backwash effect on writing instruction (Breland & Jones, 1982; Godshalk et al., 1966; TVE Joint College Admissions [TVEJCA], 2011). In the present study, the students consciously know that they utilize discourse-level knowledge in the indirect writing test because teachers do instruct them to apply the concept to cope with the items. While in the direct writing task, they only turn their attention to abilities at the word and sentence levels. Since teachers seldom teach the students how to compose actual writing, the students only think about grammar and vocabulary while doing the picture writing task. It is also possible that the students apply discourse-level knowledge unconsciously owing to their lower language proficiency levels and fewer writing experiences. Accordingly, if the two writing tasks are combined in the entrance exam, writing teachers would be urged to teach direct writing. By so doing, the students would consciously know that writing also involves discourse organizational knowledge.

The researcher of the present study thus proposes that both direct and indirect writing assessment be combined in the EPS writing test of the TVE Joint College Entrance Exam. As Teng (2002) advises, a direct writing component should account for 20 to 30% of the total writing exam. As for the item types for the direct and indirect writing, the researcher recommends the following on the basis of the findings

of the present study: The multiple-choice items could retain SI and SD, the two

subtests resulting in higher correlations in the present study, and add some basic item

types, such as grammar choice, to assess examinees' writing ability indirectly. The

direct writing could adopt picture writing, and/ or essay writing to examine the

students' compositional ability.

Following the writing testing reform, a comprehensive rating scale should be

made to evaluate students' true achievements as writers in direct writing (Breland et

al., 1987; Cho, 2003; Hamp-Lyons, 1990; Jacobs et al., 1981; P. Lin, 2005; Weigle,

2002; White, 1984; You et al., 2002). In accordance with the present study, the testing

center of the TVE Joint College Entrance Exam could use the scoring rubric adopted

for evaluating SAT picture writing test as a reference to develop a rating scale that

could best rate DAFL students' proficiency in writing. The rating rubric should be

developed through discussions and meetings with college professors, vocational high

school composition teachers, and testing staff, who have expertise in writing

assessment and scoring. The content and the standard of the grading rubric could then

contribute to English writing instruction to DAFL students because composition

teachers might have a clearer understanding of what to teach and how to score their

students' written works.

Besides developing the adequate rating scale, appropriate rater training should

be provided to maintain reliable judgment on direct writing (Breland et al., 1987;

Hamp-Lyons, 2003; Jacobs et al., 1981; P. Lin, 2005; Shohamy et al., 1992; Weigle,

2002; White, 1984; You et al., 2002). Through sufficient and appropriate rater training,

error variance due to rater bias derived from human ratings could be greatly reduced

(Penny et al., 2000; Weigle, 2004).

CHAPTER FIVE

CONCLUSION

Based on the results and findings of the present study, this chapter presents a conclusion. First, a summary of the major findings is introduced in an attempt to answer the three research questions of the current study. Then, implications for writing instructions to students from Department of Applied Foreign Languages (DAFL) are suggested. Third, limitations of the study are presented. Finally, suggestions for future research are discussed.

Summary of Major Findings

The results of the present study can be summarized in relation to the three research questions proposed in the study. The first research question, addressing how the participants' scores of the indirect writing test of English Professional Subject (EPS) correlate with their performances in the picture writing task, obtains a significant correlational result. A computation of correlation between the scores of the two writing tasks reveals a moderate correlation coefficient of .58. The result suggests that the EPS multiple-choice writing test could somehow reflect the participants' overall writing ability. It is thus believed that the indirect writing test could, at least in part, serve as a good indication of the participants' writing competence in direct writing.

The second research question further goes into which subtests of the EPS indirect writing test are more related to the participants' performances in direct writing. After four separate computations of correlations between the participants' scores of the four subtests and their performances in the picture writing task, the researcher attains moderate correlations of .52 and .51 for sentence insertion (SI) and sentence deletion (SD) respectively, and low correlations of .38 and .27 for sentence rearrangement (SR) and topic sentence selection (TSS) respectively. From the

correlation results, SI and SD, with stronger relations with picture writing, could better evaluate the students' direct writing proficiency and thus be depended on as a better indication of their actual writing performance. Nonetheless, TSS and SR, because of their low correlation results, are less appropriate to assess the students' competence in direct writing.

In terms of the third research question, asking about the participants' opinions on the indirect and direct writing tasks, four findings are yielded from the analysis of the two questionnaires. First of all, it is found that the students turn to different abilities in performing the two writing tasks. In the EPS multiple-choice writing test, the participants employ more writing knowledge at the above-sentence level, namely establishing coherence in contexts (above 80.7% in all of the four subtests). On the other hand, in the picture writing task, the students utilize more knowledge at the word and sentence levels, that is, applying previously-learned word and grammar knowledge (both referred to over 78.2%). It seems that the students apply discourse-level knowledge in the indirect test, but they do not apply the same concept to the direct task. If the two writing tasks are combined in one single test, teachers would be urged to teach direct writing. The students would then realize that direct writing also involves discourse organizational knowledge.

Second, the findings indicate that the participants encounter different difficulties at the word and sentence levels as well as at the discourse level in the two writing tasks. At the word and sentence levels, in the EPS multiple-choice writing test, the students have a hard time understanding the meanings of the words (over 55.6% in all of the four subtests). In the picture writing task, the participants could not find the right words to use (63.9%), and could not transform thoughts into sentences (57.1%). At the discourse level, in the indirect writing test, difficulties are experienced in finding out coherence in contexts (over 51.5% in all of the four subtests). In the direct

writing task, the students have problems organizing thoughts into a paragraph

(56.3%).

Third, comparing the two writing tasks, the participants prefer multiple choices

to direct writing. According to the findings of the questionnaires, although they like

doing the picture writing task (63.9%), they still consider multiple choices an

appropriate format to assess their writing ability (55.5%). Specifically, they think the

direct and indirect measures of writing are almost of equal difficulty (47.9% and

48.7% for the two writing tasks respectively). However, when they are asked which

kind of task they prefer to take, more students (55.5%) favor the indirect test.

Finally, more students tend to stick to the indirect format in the assessment of

the EPS writing test of the Technological and Vocational Education (TVE) Joint

College Entrance Exam. It is shown that 51.3% of the students think the entrance

exam should not adopt direct writing in the future. As for the participants' preferred

testing format, 47.9% of the students stand for multiple choices, 37% for the

combined measure, and 11.8% for picture writing.

Implications

From the findings of the present study, it is clear that the students actually know

little about writing because teachers seldom teach direct writing owing to the present

testing format. Nonetheless, writing is an important language skill. If the combined

measure could be implemented, writing would be taught and then the writing

instruction to DAFL students in commercial vocational high schools in Taiwan would

be overhauled. The present study thus proposes three pedagogical implications to

cope with the change of the testing format: encouraging extensive reading, performing

actual writing, and emphasizing the process of writing.

Encouraging Extensive Reading

In order to facilitate students in their composing process, writing teachers

should first encourage extensive reading in their composition instruction. From the findings of the present study, it is indicated that the students are bothered and restricted by the limitations of their language abilities while performing writing. They could not convey their message through the written language mainly due to their insufficient vocabulary size. Researchers in the literature of writing have also pointed out that inadequate vocabulary knowledge might impede students' ability to express their ideas freely in the process of writing (H. Chen, 2001; Raimes, 1985; Witte & Faigley, 1981).

To remedy students' lack of vocabulary knowledge, reading should be incorporated into composition instruction to enhance their language competence required in writing (D. Chen, 1998; Eisterhold, 1990; Krashen, 1984; National Teachers' Association [NTA], 2011; You et al., 2002). Hall and Birkerts (2007) made an incisive remark on the intimate connection between reading and writing:

> There is no writing well without reading well. The two activities are intimately connected….For both take place in and through language….Reading is the process of writing in reverse, and writing is the mirror image of reading. The mirror…is language itself. (p. 26)

It is thus proposed that writing teachers should assign student writers "large amounts of self-motivated reading for interest and/ or pleasure" (Krashen, 1984, p. 20) to facilitate their acquisition of the written language code.

Performing Actual Writing

Performing actual writing has long been ignored in the writing instruction to DAFL student writers because it is not tested in the entrance examination. If the combined measure is administered, writing teachers should put actual writing into practice in their teaching hours. By so doing, writing teachers could direct their students' attention to the elements of effective writing and open up an opportunity for

them to integrate all these elements (Godshalk et al., 1966). Once the students are equipped with the ability to compose actual writing, they could develop composite writing skills.

Emphasizing Writing Process

In the writing instruction, writing teachers should treat writing process as an exploratory process of discovering meaning (Zamel, 1982, 1983). Composition teachers could thus give their students an opportunity to write drafts and then provide feedback for them to revise (Raimes, 1991). During the recursive process of writing, student writers could move back and forth to discover, create, and synthesize ideas. If possible, classroom discussions and even teacher-student conferences should be held between drafts so the students could have a better understanding of where needs to be worked on and how to do it (Zamel, 1982, 1983).

Moreover, writing teachers should implement content-specific writing instruction at the start of the writing process (Raimes, 1987, 1991; Zamel, 1982, 1983). As Zamel (1982) states, linguistic forms are "important features of writing, but they need to be taught not as ends in and of themselves, but as the means with which to better express one's meaning" (p. 207). The content-specific writing instruction could then reinforce the notion that writing means working with content to generate, plan, organize, revise, and edit ideas. After the students have grasped ideas and organization, linguistic accuracy could be introduced to facilitate their communication in the second language.

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Limitations

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Although the findings of the study make some contributions to writing instruction and assessment, the study is not without limitations. Hence, making generalization of the present findings should be held conservative.

The first limitation concerns the incomprehensive results regarding the abilities

the participants might utilize and the difficulties they might encounter derived from direct writing questionnaire (DWQ) and indirect writing questionnaire (IWQ). Since the students receive little instruction in writing and practice, they might not fully understand the meanings and concepts of coherence and discourse structure mentioned in the two questionnaires and thus might not know how to mark on the items. Besides, the statements of abilities and of difficulties, itemized in both DWQ and IWQ, might not cover the full range of the situations they might face in taking the two writing tasks. Despite the fact that the participants were given a chance to express themselves in related questions, few responses were elicited. It is thus believed the information yielded from the questionnaires might not be comprehensive enough to capture what they actually utilized and bumped into while doing the two writing tasks.

The second limitation is about the students' recommended item types for indirect writing test elicited from IWQ. Now that the students do not fully understand what the item types are for, they might not know which item type to recommend. The validity of the questionnaire, in this regard, is thus under question.

Furthermore, the study did not interview the participants for their perspectives on taking the two writing tasks, thus lacking in-depth data to supplement the results of the frequency analysis of the questionnaires. Now that the participants, the third-year DAFL students, were busy preparing for their TVE Joint College Entrance Exam at the time while the research was being conducted, it appeared that they might not have additional time allotted for interview apart from the two writing tasks and the two questionnaires. For that reason, interview, the research instrument that might take up too much class time, was crossed out from the present study. Nevertheless, without interview, the researcher might miss an opportunity to discuss the participants' views from the standpoint of the ample qualitative findings.

Then, the study is lacking in comments from DAFL writing teachers on the two

types of writing tasks. The present study only administered the two questionnaires to the students to survey their attitudes on the two writing tasks. If their teachers' opinions could also be included in the study, the researcher could report the findings from different points of view.

Another limitation is about the gender ratio imbalance of the participants in the study. The male to female ratio of the DAFL students in the population pool is almost one to three. But the random sampling of the study draws too many female students (the male to female ratio of the participants in the present study is one to six). The imbalanced male and female students might influence the correlation results for females are rated more highly than males in the quality of writing (Engelhard et al., 1992).

Moreover, the research did not analyze the differences between the three schools in the great Taichung area from which the 119 samples were taken. The study treated the three different schools as a whole in the analysis and presentation of the data so as to provide overall explanation for the questions the research was intended to answer. Nonetheless, because students from each school might demonstrate diverse performances and hold different viewpoints toward the two writing tasks, the research design might not reveal the individual differences of the three schools.

Finally, external validity of the present study may be under threat if the findings are generalized to the whole population. Samples of the study were only drawn from the great Taichung area. It might be bold to generalize the research results to all the DAFL students in commercial vocational high schools in Taiwan because students from different areas of Taiwan might have distinct performances and opinions on the writing entrance exam.

Suggestions for Future Research

On the basis of the findings of the present study and in the context of previous

research, several suggestions are provided as follows. First of all, it is suggested that future studies of a similar nature should examine the validity and reliability of the items of the EPS multiple-choice writing test. Through the inspection, future research could locate the items that undermine the correlations of the indirect writing test with direct writing. It is then recommended that future researchers could adopt more effective items and then investigate the correlation of the participants' scores on the alternative writing test with their performances in direct writing. The diversity of the correlation coefficients between the original and the alternative ones can thus be manifested.

Second, the researcher recommends that future research should compare the correlations between the scores of the students from different proficiency groups with their performances in direct writing. Future research could divide the participants into three proficiency groups, namely advanced, intermediate, and basic, and carry out the computations and comparisons of the correlations of the three groups. Future research could even compare the correlations of each group's performance in the four subtests of the multiple-choice writing test and in the picture writing task. After the group correlational comparison, it is believed that the interaction or connection between the indirect and direct writing tasks can be delved more deeply.

Third, the optimal combination of item types for the multiple-choice writing test should be investigated in future studies. Future studies could retain SI and SD, the subtests with moderate correlations in the present study, and add some more item types recommended in the literature, such as grammar usage and sentence completion, to find out the best combination of subtests that would result in higher correlation coefficients with direct writing.

Finally, it is proposed that future research of a similar nature should adopt more writing tasks in direct writing. Some of the participants in the present study think that

picture writing would interrupt and restrict their trains of thought and suggest the use of essay writing. Hence, future research could add essay writing to examine students' direct writing ability from different angles.

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School: _____   Class: _____   No: _____   Name: _____

第一大題：段落主題句(第 1－10 題)

> 說明：以下十篇段落各缺少一個主題句，請依各段落文意，就所附的四個答案選項中，選出一個最恰當的主題句，並將答案代號標示在答案卡上。

1. _____ After taking some training classes, a retiree volunteer from the local community can receive a certificate and officially become a toy doctor. Records of treatments are returned to the toys' owners to make them aware that toys do not have to be discarded so easily. Not simply throwing them away when they break is a kind of lesson in values. This also fosters in the kids a sense of appreciation and a habit of taking care of things.

   (A) Just bring your "injured" toys to the Toy Workshop, and the well-trained "toy doctors" will do their best to bring them back to health.
   (B) As of now, six elementary schools around Taiwan have applied on their own initiative to take part and set up experimental community toy workshops.
   (C) The Toy Workshop not only gives the retiree "doctors" a chance to utilize a lifetime of experience, it also teaches children the message of environmental conservation.
   (D) The therapeutic function of the technical classes and the uplifting appreciation from the kids attract the seniors to the Toy Workshop volunteer program.

2. _____ Perhaps we can learn to transform our colored pencils into one of those sculptures by South African artist Jennifer Maestre. She cuts hundreds of colored pencils into small sections and drills a hole in each to turn them into beads, which she then carefully stitches together in artistic shapes. Other paper-craft artists devise incredibly complex three-dimensional sculptures by cutting, folding, and gluing. Remarkably, the majority of Danish artist Peter Calleson's impressive work is formed from a single A4 sheet.

   (A) When most of us are faced with a blank sheet of paper, we only think of doodling.
   (B) There are multiple ways to use a pencil and paper when we are creating art.
   (C) It is very economical to use pencils and paper to create imaginative artistic works.
   (D) No matter where they are from, male artists are no less talented than female artists.

3. _____ It is a wearable camera set to take photos passively every 30 seconds throughout the day. Researchers tracked the brain activity of patients with memory loss and found that SenseCam images sparked genuine memories of their day. In other words, the images provided powerful cues that activated parts of the brain associated with normal episodic memory. Thus, patients' experiences were remembered through thoughts, feelings, and other events not shown in the images.

   (A) SenseCam is a newly developed memory aid for patients affected by Alzheimer's disease.
   (B) Alzheimer's disease first affects patients' ability to remember the recent past.
   (C) Alzheimer's patients and their families welcome the newest technological development.
   (D) To Alzheimer's patients, thoughts and feelings are more important than images.

4. _____ Forty percent of the territory has been set aside as country park because a great deal of the hilly, landslide-prone terrain is unsuitable for building and so is left unmolested. Local hikers have long enjoyed forested uplands, hidden waterfalls, and stony ridges that plunge down to rugged and wild coastlines. In recent years, a number of organizations have made it easier for tourists to discover the city's lesser-known side. One of these is Ark Eden on Lantau, an environmental center promoting guided walks to see some natural beauty of this largest island. As a green destination, Hong Kong does have the capacity to delight you.

(A) Most tourists may wonder whether development-mad Hong Kong has much of an environmental conscience.
(B) Visitors to Hong Kong have typically found it more difficult to discover its natural scenery than shopping convenience.
(C) Do not be surprised when you hear that the authorities in Hong Kong like to refer to it as "Green Hong Kong."
(D) Although home to a number of major developments, Lantau's land is largely undeveloped and not densely populated.

5. _____ According to the editor-at-large of *Psychology Today*, kids who have developed a well-earned sense of mastery are more optimistic and decisive. In addition, studies conducted by a Stanford psychologist proved that the kids who were complimented on their intelligence, rather than the ones praised for their hard work, were much more likely to turn down the opportunity to do a challenging new task that they could learn from. What's more, after a person becomes proficient at a mental task through extensive drill, brain activity can shift to the areas associated with higher-level thinking and reflection.

(A) Many elements of strict Chinese parents' approach are supported by research in psychology and cognitive science.
(B) Research demonstrates what distinguishes Chinese parents is that they assume strength instead of fragility.
(C) Willingness to drill is one major way in which Chinese parents' approach differs from that of their Western counterparts.
(D) By restricting children's choices as a child, Chinese parents prepare them for many choices in their lives as an adult.

6. _____ Extra weight puts an added toll on people's bones and joints. Hence, for the overweight, running is not an option, and walking can become difficult. G-Defy shoes will take the pressure from the wearers' large frame body and make them more active. Overweight people will notice immediate relief of common pain during exercise as the springs of G-Defy athletic shoes absorb most of the impact by easing the stress on their joints, back, and neck while walking, running, or jumping.

(A) As overweight people slip their feet into G-Defy, the Smart Memory rebound spring propels them forward, reduces their fatigue, and conserves their energy.
(B) Modern people should give their whole body a break from the stress of their high-impact lives and experience breakthroughs in their lifestyle.
(C) Within ten days of regular use, G-Defy's special combination of space age rubber and durable spring will begin to improve your overall comfort.
(D) Providing various benefits to enhance athletic lifestyle, this gravity-defying footwear is a scientifically engineered blessing for the overweight people.

7. _____ Tolerating "wrong" answers is essential because creativity depends upon ambiguity, making mistakes, and being playful. You must lower your standards on neatness or quietness at home so as not to discourage kids' creative impulses. Since praising or rewarding too much can zap their creativity and intrinsic motivation, you had better go easy on the rewards. Especially, when you express yourself and model creativity, children not only learn creative behavior but also see being creative as something of value.
   (A) In general, little kids are naturally creative, and most readily take notice of their own creative impulses.
   (B) Your creative genius and inner Muse may just need some encouragement and a little practice.
   (C) Here are some reminders to help you nurture your children's creative spirit and original self-expression.
   (D) The qualities that facilitate kids' creative accomplishments can sometimes make them hard to live with.

8. _____ As the largest flying parrot species in the world, hyacinth macaws have been hunted for food and pursued for the caged bird trade and for their beautiful feathers to be used in head-dresses. Dwindling numbers are also caused by habitat loss due to grass fires, deforestation, and urban redevelopment. At the Jurong Bird Park, which is part of Wildlife Reserves Singapore, they are bred to ensure the existence and survival of this endangered species from South America. The successful breeding program culminated in two hatchlings in February 2010.
   (A) Generally speaking, Asian people work harder on wildlife preservation and breeding than most South Americans do.
   (B) Although facing an uncertain future in their native South American habitats, hyacinth macaws are given a new life in Singapore.
   (C) Listed as one of the endangered species, hyacinth macaws deserve more humane concern and protection in Asia than elsewhere.
   (D) Naturally affectionate, intelligent, and playful, hyacinth macaws symbolize ecological balance to the people in Singapore.

9. _____ In this mosquito-infested country, an estimated 450,000 families live in high-risk malaria prevalent areas. Luckily, there is a simple and cost effective way to protect children from malaria. One insecticide treated bed net costs US$6 only and lasts up to five years. Sleeping under it can reduce overall child mortality by 20 percent. The public's support for this United Nations International Children's Emergency Fund (UNICEF) project can save a lot of children's lives.
   (A) The United Nations International Children's Emergency Fund is working with the government of Myanmar to provide effective and affordable malaria prevention to families with small children.
   (B) Malaria is both preventable and treatable, and effective preventive measures as well as curative tools have been developed by non-governmental organizations.
   (C) To reduce vulnerability to malaria and to combat the spread of malaria, the United Nations International Children's Emergency Fund distributed insecticide treated bed nets exclusively to Myanmar households.
   (D) According to the United Nations International Children's Emergency Fund, approximately half of malaria deaths in the Southeast Asia region occur in Myanmar's malaria prevalent township.

10. _____ The foster children who are the hardest to find homes for consist of kids older than ten, kids with special needs, sibling groups, and African Americans. Success depends on close coordination of a professional team that includes two full-time private investigators who track down dozens of members of a child's biological family. On a practical level, relatives are more likely than strangers to go through with adoption, and having contact with family is critical to a child's identity. As visitors from around the country are eager to observe and replicate its method, Extreme Recruitment might pave the way to revolutionize the foster-care system in America.

  (A) Before allowing strangers to adopt foster children, the government should make sure they do not have family members who can take care of them.

  (B) There are nearly half a million American children in foster care, but they would age out of the foster-care system when they turn eighteen.

  (C) The Internet, especially public databases like publicrecordsnow.com and virtualgumshoe.com, has made Extreme Recruitment's family-matching job easier.

  (D) An innovative program in St. Louis, Missouri, is making big strides in matching hard-to-place kids with adoptive families in a highly effective way.

第二大題：段落組成(第 11－17 題)

說明：以下七個段落，各缺少一個句子或子句，請依各段落文意，就所附的四個
選項中，選出一個最恰當的答案，並將答案代號標示在答案卡上。

11. When it comes to shopping trips within Asia, many people automatically think of Bangkok and Hong Kong. However, another retail heaven in the region begins to attract serious shoppers due to varieties and bargains. With a mall on almost every corner, and abundance of flea markets and bazaars, the city of Manila is a shopper's new paradise. Whether it is big name brands, discount gems or a unique piece of furniture that you are after, _____

  (A) you can go to the fitness center.

  (B) Manila has it all.

  (C) most people in Manila speak English.

  (D) shopping is your national sport.

12. Cutting-edge programs and reports of Chinese-language courses popping up in heartland America would all seem to suggest that Americans are on the fast track to learning Chinese and ultimately understanding China. _____ With the recent economic crisis, Americans must appreciate better than anyone else their frightening loss of a competitive edge to the Chinese. You will be hard-pressed to find any American who does not think grasping the language of the world's fastest-growing economy is a good idea.

  (A) The U.S. lacks language support and Chinese instructors.

  (B) Learning Chinese has become one of Americans' top priorities.

  (C) Americans are not learning the main tongue spoken in mainland China.

  (D) Indeed, convincing American parents of the importance of learning Chinese is essential.

13. Seoul is quickly gaining greater visibility as a global green pioneer and a civic design innovator. In July, it was named a UNESCO (United Nations Educational, Scientific, and Cultural Organization) City of Design in appreciation of its use of diverse design policies, its rich cultural heritage, and its creative potential to make the city more livable and sustainable. And in September, the international IDEA (International Design Excellence Awards) Brazil 2010 Awards, one of the planet's most prestigious design prizes, chose the Seoul Metropolitan Government as its gold medal winner for its innovative use of eco-friendly design strategies. _____
    (A) These are two indications that when it comes to its model urban development programs and building a truly sustainable city, Seoul is doing things right.
    (B) In Seoul, the haze that used to darken the sky is gradually disappearing, with more days of clear skies and high visibility.
    (C) Another eco-friendly auto that begins to make an appearance on Seoul's roads is the neighborhood electric vehicle.
    (D) Seoul is one of the world's megacities and its challenge is to accommodate the growth of the population while reducing the impact.

14. The Taiwan Excellence awards, launched in 1992, are overseen by the Taiwan External Trade Development Council. When the 2010 Taiwan Excellence Gold Awards were announced earlier, the eight winners cut a remarkably wide swath, ranging from a robot and a router—representing the country's traditional skill in technology and electronics—to an eco-smart car and a miniature yellow submarine. _____ On the other hand, all the Taiwan Excellence Gold Award winners had one thing in common: "innovalue," a combination of innovation and added value that has long been the signature of the country's leading products.
    (A) Taiwanese parents raise their children with high expectations and want them to do well in every aspect when they grow up.
    (B) The diversity of the 18th annual awards signals the growing scope of the country's expertise in research and development, design, and manufacturing.
    (C) Taiwan is the birthplace of a new generation of entertainers who are as committed to excellence as the country's companies are.
    (D) Most parents here in Taiwan are not afraid of investing in their children's education—whether it is in science, arts or sports.

15. Television business in China has developed largely in isolation from the rest of the world. Despite tremendous efforts, _____ They have been restricted to TV sets in Hong Kong and in expensive hotels, or reduced to selling the odd programs to domestic networks. Nonetheless, isolation does not mean Chinese television is stagnating. On the contrary, it is progressing at a lunatic pace.
    (A) television is well-suited to bringing new products to the attention of China's fast-growing middle class.
    (B) China Central Television announced that it had already booked 12.7 billion dollars of advertising for 2011.
    (C) the TV industry used to be dominated by the state-run China Central Television.
    (D) Western media firms have been unable to launch mainland channels in China.

16. The growing number of students with student loans reflects two changes: the rising cost of college tuition and the growing number of students from low- and middle-income families going to college. The rise in college tuition here is easy to spot. Tuitions at both public and private universities rose much faster than the consumer price index. As for the economic backgrounds of students with loans, the regulations governing student loans explain. Only families with annual incomes below NT$1.2 million can apply for these loans. _____ Many college students take out student loans to reach their educational goals, but graduates, even before they find a job, immediately find themselves facing the pressure of making payments! It is hard to decide if student loans should be regarded as dream makers or heavy burdens.

    (A) Consequently, the rise in the percentage of students applying reflects the greater number of students from low- and middle-income families applying.
    (B) According to the Ministry of Education, the number of applications for student loans from students in high schools grew 5.3 times from 1998 to 2008.
    (C) As summer slips into fall, universities have finished shipping out this year's graduates and have turned toward welcoming new students.
    (D) Going to college in Asian countries certainly poses a heavy financial burden on college students and their families.

17. Portuguese bullfighters belong to a unique tradition. For one thing, the bulls are not killed in the ring. _____ They are locals with day jobs, neighbors who cement their friendship in an ancient way: by risking their lives together. Their event occurs in the place called pega. Eight men enter an arena, line up in single file, and then try to subdue a charging bull by hand. They have no weapons and only each other to rely on. Every emotion is on naked display. There is something timeless about their bravery, something unifying about the beast. Certainly their way—their honor in the ring, their deeply cultivated sense of family outside—is special and traditional.

    (A) On the other hand, bullfighting is personal and artistic.
    (B) Not surprisingly, the Spanish show little emotion.
    (C) For another, some participants are amateurs.
    (D) Secondly, bullfighting is a quest for heroism.

第三大題：段落語意不連貫句子挑選(第 18－24 題)

說明：以下七篇段落，各有四個句子依序出現在答案選項，每個句子前有選項代碼，分別為(A)、(B)、(C)、(D)。請依各段落整體內容，選出一個造成段落文意最不連貫的句子，並將該句子的選項代碼標記在答案卡上。

18. Even people who do not have lung problems can find strong scents irritating.
    (A) Polls find that about 30 percent of people are bothered by fragrances, especially strong perfumes.
    (B) Heavy perfume smells often trigger bad reactions such as headaches, itchy eyes, and dizziness.
    (C) If you give people an ambiguous scent and tell them it is something pleasant, most will respond positively.
    (D) About one to five percent of the population is very sensitive, suffering chemical sensitivities when exposed to scents.

19. Scientists study bowerbirds because they are surprisingly similar to people.
    (A) The diets of bowerbirds consist mainly of fruits but may also include insects, flowers, nectar and leaves.
    (B) These are birds that can build a structure that looks like a doll's house with an artfully decorated platform.
    (C) They can arrange flowers, leaves, and mushrooms in such an artistic manner that you would think a painter was about to set up his easel.
    (D) Bowerbirds kill beetles solely for the purpose of decorating, and humans are the only other species known to use animals in this way.

20. For the elderly, it is never too late to start physical exercise.
    (A) Many studies have shown that elderly persons benefit from a variety of exercise programs.
    (B) There is evidence proving that continued exercise reduces the degree of physical and mental slowness.
    (C) Before starting exercise programs, the elderly should have a physical examination to ensure they choose the right kind of exercise.
    (D) Caring for grandchildren is a good way to help the elders stay mentally active.

21. Few of us take time to write traditional letters any longer, even to those to whom we are close.
    (A) Most artists still keep handwritten journals with sketches, notes, and ideas, but material is now in the digital format.
    (B) We communicate differently when we e-mail or text, both methods characterized by speed and informality.
    (C) The meditative consideration, which accompanied a handwritten letter, is almost entirely absent.
    (D) We may be communicating more frequently and with more people, but the depth and quality of our communication has diminished.

22. Superstitious behavior is prevalent among American professional baseball players.
    (A) In general, American players seem to be more superstitious than Japanese players seem to be.
    (B) Some players are careful never to step on the chalk foul lines or the lines of the batter's box.
    (C) Others will never put on their caps until games start and will not wear them on the days they do not pitch.
    (D) If a player has a poor spring training or a bad year, he may refuse to wear the same uniform number again.

23. The body gets most of its vitamin D not from diet but from skin exposed to the ultraviolet B (UVB) radiation in sunlight.
    (A) Unprotected skin on the arms and legs need about 15 minutes of sun exposure a day in spring, summer, and fall to make enough of the vitamin.
    (B) Vitamin D deficiency causes rickets, a disease characterized by a failure of bone tissue to properly mineralize, resulting in soft bones and skeletal deformities.
    (C) However, the production of vitamin D is effectively blocked if you follow current advice to prevent skin cancer by using ample amounts of sunscreen.
    (D) Experts now advise people not to use too much sunscreen because it may completely block UVB radiation and prevent synthesis of vitamin D.

24. For the Kazakh people in Central Asia, hunting with eagles is one of the highest expressions of their cultural heritage.
    (A) Today, the Kazakhs do not preserve the time-honored tradition of eagle hunting to get food or make money.
    (B) With an eagle's meals amounting to half a kilogram of meat a day, hunting with an eagle is certainly not for economic gain.
    (C) Rather, eagle-hunting is a sport that involves sophisticated techniques and requires a combination of strength, gentleness, and a heroic spirit.
    (D) Traditionally, wild baby eagles were taken from the nest to be trained as hunting birds, but now this practice is strictly limited.

第四大題：段落重組(第 25－30 題)

說明：以下六題每題各有若干句子，請就段落文意連貫的目的，選出正確之組合選項，
　　　並將答案代號標記在答案卡上。

25. ① Cinema can have a tremendous reach, and its influence can be both strong and sustained.
    ② Taiwan has been making its own efforts in this direction, and now these efforts are beginning to bear fruit.
    ③ Today, this has become a powerful marketing tool and an irresistible shortcut to fame for countries and cities around the world.
    ④ However, the opportunity for big-screen success for cities and countries does not just fall out of the sky.
    ⑤ Rather, places need to build good relationships, make themselves attractive places for shooting films, and actively fight for their chances.
    (A) ①③④⑤②　　(B) ①④⑤③②　　(C) ③④⑤②①　　(D) ⑤④③②①

26. ① Life insurance policies, for example, usually pay a certain sum on a specific date when a person stops working at the age of 60 or 65 or whenever, or earlier if the person dies.
    ② Insurance is designed to provide a sum of money to compensate for any damage suffered as the result of a risk.
    ③ Some people also use insurance policies as a way of saving.
    ④ Frequent hazards, such as fire, accident, theft, loss, damage, injury or death, may have been insured against in a specific insurance contract.
    ⑤ Thousands of people pay premiums to insurance companies, which use the money to compensate people who suffer loss or damage.

(A) ③⑤①②④   (B) ②④⑤③①   (C) ④⑤③①②   (D) ②④③⑤①

27. ① Coral is an animal, a marine polyp that lives in vast colonies.
   ② Coral reefs are found in tropical waters, between latitudes 30 degrees north and south, in the Western Atlantic, Indian, and Pacific Oceans.
   ③ Reefs are outcroppings that rise up from the sea floor.
   ④ While most of the reefs are the remains of dead coral, there must be good percentage of living coral to ensure that the reef will continue to survive.
   ⑤ The calcium-based skeletons that they secrete build up over time to form vast reefs.
   (A) ①③②④⑤   (B) ①⑤③②④   (C) ①②④③⑤   (D) ①②③④⑤

28. ① Fortune hunters used to think that if they could find the elephants' graveyard, they would be rich.
   ② According to some accounts, an animal that was wounded or sick would be guided and half carried by other elephants so that it could reach this sacred spot.
   ③ However, despite numerous attempts, no one has ever found this mysterious Elephant graveyard.
   ④ Of course, if this were true, it would mean that great amounts of ivory would have accumulated at this hidden place.
   ⑤ Legend had it that old elephants, when they knew they were approaching death, would go to the same secret spot in the jungle to die.
   (A) ⑤②④③①   (B) ①②③④⑤   (C) ①⑤②④③   (D) ①③②⑤④

29. ① And since insects contain a fair amount of salt, they are already well seasoned.
   ② For example, the giant beetle is a prize catch in Africa; caterpillars are a popular dish in Mexico, where they are fried and served.
   ③ Indeed, in those countries where insects are eaten, they are usually considered great delicacies.
   ④ Eating insects actually is very sensible, and many of them grow to respectable size or live in dense groups that can be easily harvested.
   ⑤ They are very nutritious; after all, many birds and mammals ingest diets consisting of nothing but insects.
   (A) ④①②③⑤   (B) ①②③④⑤   (C) ④⑤①③②   (D) ④③⑤①②

30. ① While some people do find love in cyberspace, keep in mind that there are potential dangers.
   ② Finding love on the Internet is becoming more and more commonplace in today's fast-paced society.
   ③ Though most people you meet online may be nice and sincere, there are a few who have bad intentions and some can even be violent.
   ④ If you decide to meet in person, make sure you meet in a public place, and also tell a friend where you are going and whom you are going to meet.
   ⑤ Be very careful about giving out personal information to someone you meet online, such as phone numbers, the name of your workplace, and your address.
   (A) ⑤③①④②   (B) ①②③④⑤   (C) ③④⑤①②   (D) ②①③⑤④

Appendix B

Answer Keys to EPS Multiple-choice Writing Test

No.	Ans.	No.	Ans.	No.	Ans.
1	C	11	B	21	A
2	B	12	B	22	A
3	A	13	A	23	B
4	C	14	B	24	D
5	A	15	D	25	A
6	D	16	A	26	B
7	C	17	C	27	B
8	B	18	C	28	C
9	A	19	A	29	C
10	D	20	D	30	D
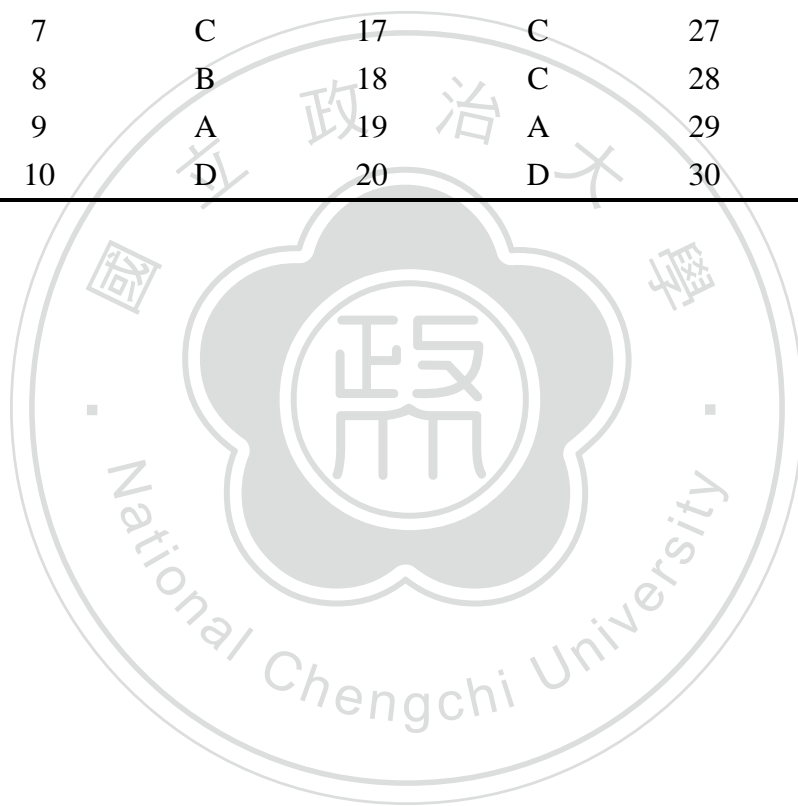
English Picture Writing Task

School: _____ Class: _____ No: _____ Name: _____

說明：1.依提示在橫線上寫一篇英文作文。
　　　2.文長100個單詞(words)左右。

提示：根據下列連環圖畫的內容，將圖中女子、小狗與大猩猩 (gorilla) 之間所發生的事件作一
　　　合理的敘述。

_____

_____

_____

_____

_____

_____

_____

_____

Scoring Rubric Used for Scoring Picture Writing Task (Chinese Version)

項目＼等級	優	可	差	劣
內容	主題(句)清楚切題，並有具體、完整的相關細節支持。 (5-4 分)	主題不夠清楚或突顯，部分相關敘述發展不全。 (3 分)	主題不明，大部分相關敘述發展不全或與主題無關。 (2-1 分)	文不對題或沒寫(凡文不對題或沒寫者，其他各項均以零分計算)。 (0 分)
組織	重點分明，有開頭、發展、結尾，前後連貫，轉承語使用得當。 (5-4 分)	重點安排不妥，前後發展比例與轉承語使用欠妥。 (3 分)	重點不明、前後不連貫。 (2-1 分)	全文毫無組織或未按提示寫作。 (0 分)
文法、句構	全文幾無文法錯誤，文句結構富變化。 (4 分)	文法錯誤少，且未影響文意之表達。 (3 分)	文法錯誤多，且明顯影響文意之表達。 (2-1 分)	全文文法錯誤嚴重，導致文意不明。 (0 分)
字彙、拼字	用字精確、得宜，且幾無拼字錯誤。 (4 分)	字詞單調、重複，用字偶有不當，少許拼字錯誤，但不影響文意之表達。 (3 分)	用字、拼字錯誤多，明顯影響文意之表達。 (2-1 分)	只寫出或抄襲與題意有關的零碎字詞。 (0 分)
體例	格式、標點、大小寫幾無錯誤。 (2 分)		格式、標點、大小寫等有錯誤，但不影響文意之表達。 (1 分)	違背基本的寫作體例或格式，標點、大小寫等錯誤甚多。 (0 分)

Appendix E

Scoring Rubric Used for Scoring Picture Writing Task (English Version)

	Good	Fair	Poor	Very Poor
Content	Text addresses the writing task effectively and uses concrete and complete details to support a thesis. (5-4)	Text addresses the writing task adequately and uses some details to support a thesis. (3)	Text does not address the writing task adequately. The details used to support a thesis are irrelevant. (2-1)	Text either totally does not address the writing task, or does not respond to the instruction. (0)
Organization	Text is well organized, coherent and has logical sequencing. Good command of transition words. (5-4)	Text has clear organization but has some cohesive and logic problems. Adequate command of transition words. (3)	Text is inadequately organized and lacks logical sequencing. (2-1)	Content is unorganized or irrelevant to task. (0)
Grammar	Text demonstrates syntactic variety and contains only unobtrusive grammatical errors. (4)	Text contains few grammatical errors. (3)	Text contains many grammatical errors. (2-1)	Text contains serious grammatical errors that may hinder communication. (0)
Vocabulary	Effective word choice and usage. Few spelling errors. (4)	Occasional errors of word form, choice, usage and spelling. (3)	Frequent errors of word form, choice, usage and spelling. (2-1)	Merely coping words related to task. (0)
Mechanics	Only unobtrusive errors of conventions, punctuation, and capitalization. (2)		Frequent errors of conventions, punctuation, and capitalization. (1)	No mastery of conventions. Serious errors of punctuation, and capitalization. (0)

Indirect Writing Questionnaire (English Version)

School: _____   Class: _____   No. _____   Name: _____

Part I—Basic Information

1. Sex:

    ☐ Male   ☐ Female

2. How long have you been learning **English**?

    ☐ 5-6 years   ☐ 7-8 years   ☐ 9-10 years   ☐ More than 11 years

3. How long have you been learning **English Writing**?

    ☐ None   ☐ Less than 1 year   ☐ 1-2 years   ☐ 3-4 years
    ☐ More than 5 years

4. Which of the following certificate of General English Proficiency Test (GEPT)
    has you earned (Just check the certificate of the highest level):

    ☐ None   ☐ Elementary (First)
    ☐ Elementary (Second)   ☐ Intermediate (First)
    ☐ Intermediate (Second)   ☐ High-Intermediate (First)
    ☐ High-Intermediate (Second)

5. Have you ever done the EPS writing test before?

    ☐ Yes   ☐ No

Part II—Questionnaire Questions

1. What kinds of abilities do you apply while answering the first question type,
    Topic Sentence Selection? (Check all that apply):

    ☐ Recognizing punctuation   ☐ Understanding words
    ☐ Recognizing phrases   ☐ Applying grammar knowledge
    ☐ Applying reading comprehension ability   ☐ Recognizing cohesive devices
    ☐ Finding main ideas   ☐ Establishing coherence in contexts
    ☐ Applying the concept of discourse structure
    ☐ Other: _____

2. What kinds of abilities do you apply while answering the second question type,
   Sentence Insertion? (Check all that apply):

   ☐ Recognizing punctuation   ☐ Understanding words
   ☐ Recognizing phrases   ☐ Applying grammar knowledge
   ☐ Applying reading comprehension ability   ☐ Recognizing cohesive devices
   ☐ Finding main ideas   ☐ Establishing coherence in contexts
   ☐ Applying the concept of discourse structure
   ☐ Other: _____

3. What kinds of abilities do you apply while answering the third question type,
   Sentence Deletion? (Check all that apply):

   ☐ Recognizing punctuation   ☐ Understanding words
   ☐ Recognizing phrases   ☐ Applying grammar knowledge
   ☐ Applying reading comprehension ability   ☐ Recognizing cohesive devices
   ☐ Finding main ideas   ☐ Establishing coherence in contexts
   ☐ Applying the concept of discourse structure
   ☐ Other: _____

4. What kinds of abilities do you apply while answering the fourth question type,
   Sentence Rearrangement? (Check all that apply):

   ☐ Recognizing punctuation   ☐ Understanding words
   ☐ Recognizing phrases   ☐ Applying grammar knowledge
   ☐ Applying reading comprehension ability   ☐ Recognizing cohesive devices
   ☐ Finding main ideas   ☐ Establishing coherence in contexts
   ☐ Applying the concept of discourse structure
   ☐ Other: _____

5. What do you think is the most difficult question type? Please number the four item
   types on a scale of 1 (the most difficult) to 4 (the easiest).

   ☐ Topic Sentence Selection   ☐ Sentence Insertion
   ☐ Sentence Deletion   ☐ Sentence Rearrangement

6. From the items in question 5, what kinds of difficulties do you encounter while answering the most difficult question type? (Check all that apply):

☐ I do not understand the meaning of the words.
☐ I do not understand the meaning of the phrases.
☐ I do not understand the meaning of the sentences.
☐ I do not know which cohesive devices to use.
☐ I cannot find out main ideas.
☐ I cannot find out coherence in contexts.
☐ I cannot understand the meaning of the passage.
☐ I cannot finish reading the items within time limit.
☐ Other: _____

7. In addition to the four question types in the multiple-choice writing test, what else do you recommend for assessing writing indirectly? (Check all that apply):

☐ No suggestions   ☐ Word Usage   ☐ Grammar Choice
☐ Error-picking   ☐ Cloze   ☐ Sentence Paraphrase
☐ Sentence Transformation ☐ Sentence Addition   ☐ Sentence Completion
☐ Other: _____

8. Do you think it is appropriate to use the indirect format to assess writing ability?

☐ Yes   ☐ No
Reasons: _____

學校：＿＿＿＿＿＿＿　　班級：＿＿＿＿＿　　座號：＿＿＿＿　　姓名：＿＿＿＿＿＿＿＿＿

【第一部分—基本資料】

1. 性別：

☐ 男　　　　　　☐ 女

2. 到目前為止，學了幾年的「英文」：

☐ 5-6 年　　　　☐ 7-8 年　　　　☐ 9-10 年　　　　☐ 11 年以上

3. 到目前為止，學了幾年的「英文寫作」：

☐ 沒學過　　　☐ 未滿 1 年　　　☐ 1-2 年　　　☐ 3-4 年
☐ 5 年以上

4. 考取的全民英檢證照(僅勾選取得的證照中，級數最高的即可)：

☐ 尚未考過　　☐ 初級初試　　☐ 初級複試　　☐ 中級初試
☐ 中級複試　　☐ 中高級初試　　☐ 中高級複試

5. 是否曾寫過此份選擇題試題：

☐ 是　　　　　　☐ 否

【第二部分—問卷題目】

1. 在作答第一大題「段落主題句」時，請勾選你運用了以下哪些能力(可複選)？

☐ 辨識標點符號　　☐ 辨識單字字意　　☐ 辨識片語意思
☐ 運用文法知識　　☐ 運用閱讀理解能力　　☐ 辨別連接詞
☐ 辨識段落主旨　　☐ 辨識上下文的連貫性　　☐ 運用篇章結構的概念
☐ 其他：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

2. 在作答第二大題「段落組成」時，請勾選你運用了以下哪些能力(可複選)？

☐ 辨識標點符號　　☐ 辨識單字字意　　☐ 辨識片語意思
☐ 運用文法知識　　☐ 運用閱讀理解能力　　☐ 辨別連接詞
☐ 辨識段落主旨　　☐ 辨識上下文的連貫性　　☐ 運用篇章結構的概念
☐ 其他：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

3. 在作答第三大題「段落語意不連貫句子挑選」時，請勾選你運用了以下哪些能力(可複選)？

☐ 辨識標點符號　　☐ 辨識單字字意　　☐ 辨識片語意思
☐ 運用文法知識　　☐ 運用閱讀理解能力　☐ 辨別連接詞
☐ 辨識段落主旨　　☐ 辨識上下文的連貫性　☐ 運用篇章結構的概念
☐ 其他：_____

4. 在作答第四大題「段落重組」時，請勾選你運用了以下哪些能力(可複選)？

☐ 辨識標點符號　　☐ 辨識單字字意　　☐ 辨識片語意思
☐ 運用文法知識　　☐ 運用閱讀理解能力　☐ 辨別連接詞
☐ 辨識段落主旨　　☐ 辨識上下文的連貫性　☐ 運用篇章結構的概念
☐ 其他：_____

5. 你認為哪一大題最困難？請以數字 1 至 4 (困難→不困難)列出你認為的難易程度。

☐ 段落主題句　☐ 段落組成　☐ 段落語意不連貫句子挑選　☐ 段落重組

6. 承上題，在回答最困難的題型時，你遭遇到的困難有哪些？請勾選(可複選)。

☐ 不懂單字的意思　　　☐ 不懂片語的意思
☐ 不懂句子的意思　　　☐ 不知道用哪個連接詞連接上下文
☐ 找不到整篇段落的主旨　☐ 看不出上下文的連貫性
☐ 看不懂整篇段落的文意　☐ 閱讀速度太慢
☐ 其他：_____

7. 除了這份選擇題試題的四種題型外，你還建議何種選擇題的測驗題型來考英文寫作？請勾選(可複選)。

☐ 沒有其他建議　☐ 單字選擇　☐ 文法選擇　☐ 挑錯
☐ 綜合測驗　　　☐ 改寫句子　☐ 變換句子　☐ 插入句子
☐ 完成句子　　　☐ 其他：_____

8. 你認為使用選擇題的方式測驗英文寫作能力是否適合？

☐ 是　　　　　　☐ 否
原因：_____

Appendix H

Direct Writing Questionnaire (English Version)

School: _____ Class: _____ No. _____ Name: _____

Have you ever done the picture writing before? ☐ Yes ☐ No

---

1. What kinds of abilities do you apply while doing the picture writing task? (Check all that apply):

   ☐ Applying punctuation knowledge
   ☐ Applying previously-learned words
   ☐ Applying previously-learned phrases
   ☐ Applying grammar knowledge
   ☐ Using connectives to connect sentences
   ☐ Applying the concept of topic sentences
   ☐ Using supporting sentences to support main ideas
   ☐ Applying the concept of coherence in contexts
   ☐ Applying the concept of discourse structure
   ☐ Other: _____

2. What kinds of difficulties have you encountered while doing the picture writing task? (Check all that apply):

   ☐ I do not know what to write.
   ☐ I cannot find the right word to use.
   ☐ I cannot spell the words.
   ☐ I do not know how to apply the words.
   ☐ I cannot transform thoughts into sentences.
   ☐ I cannot find the right sentence pattern to use.
   ☐ I do not know how to use connectives.
   ☐ I cannot organize ideas into a paragraph.
   ☐ I do not know how to increase coherence between paragraphs.
   ☐ I do not know how to revise.
   ☐ Other: _____

3. Do you like doing the picture writing task?

   ☐ Yes   ☐ No

   Reasons: _____

4. In addition to Picture Writing, what else do you recommend for assessing direct writing? (Check all that apply):

☐ No suggestions   ☐ Sentence Making   ☐ Translation
☐ Essay Writing   ☐ Other: _____

5. Which of the following writing task do you prefer to perform?

☐ Multiple-choice Writing Test   ☐ Picture Writing
Reasons: _____

6. Which of the following writing task do you think is more difficult?

☐ Multiple-choice Writing Test   ☐ Picture Writing
Reasons: _____

7. Do you think the EPS writing test should include English writing?

☐ Yes   ☐ No

8. Which of the following testing format do you think should the EPS writing test include?

☐ Multiple-choice Writing Test
☐ Picture Writing
☐ Multiple-choice Writing Test & Picture Writing
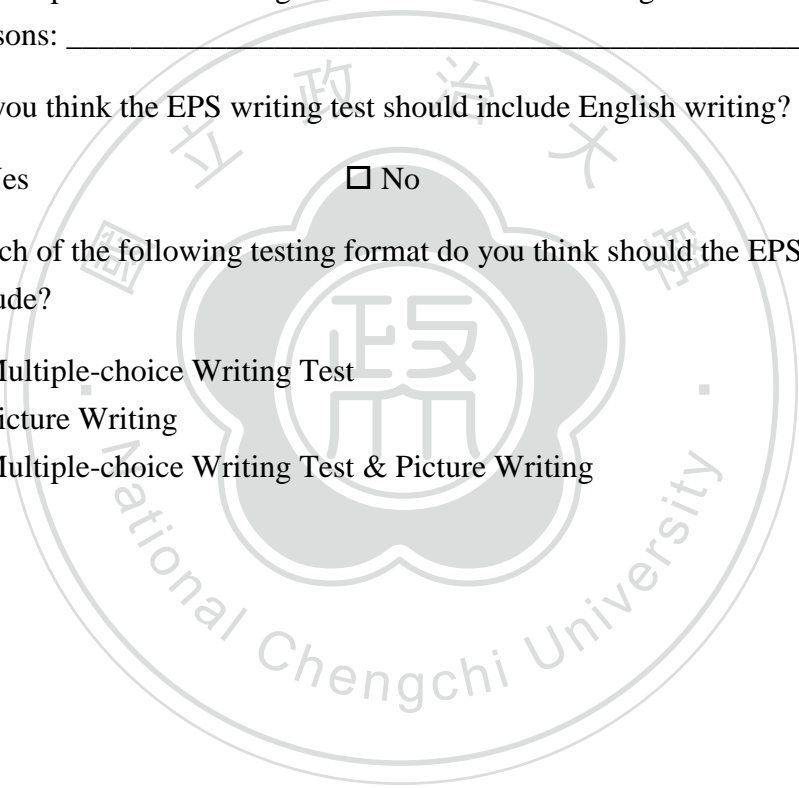
Appendix I

Direct Writing Questionnaire (Chinese Version)

學校：＿＿＿＿＿＿＿ 班級：＿＿＿＿＿ 座號：＿＿＿＿ 姓名：＿＿＿＿＿＿＿＿＿＿

是否曾寫過此篇看圖寫作：□ 是　　□ 否

1. 在寫「看圖寫作」時，請勾選你運用了以下哪些能力(可複選)？

   □ 應用標點符號知識　　　　　□ 應用已學單字
   □ 應用已學片語　　　　　　　□ 應用文法知識
   □ 使用連接詞以連貫上下文　　□ 應用段落主題句的概念
   □ 使用支持句支持主題　　　　□ 應用上下文的連貫性
   □ 應用篇章結構的概念　　　　□ 其他：＿＿＿＿＿＿＿＿＿＿＿

2. 請勾選在寫「看圖寫作」時，你遭遇到的困難有哪些(可複選)？

   □ 不知道要寫什麼
   □ 不知道要用哪個字表達語意
   □ 單字不會拼
   □ 單字不知道怎麼用
   □ 無法將想法寫成句子
   □ 不知道要用哪個句型
   □ 不會用連接詞
   □ 無法將想法組織成段落
   □ 不知道如何增加段落之間的連貫性
   □ 不知道如何修改
   □ 其他：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

3. 你喜不喜歡「看圖寫作」？

   □ 喜歡　　　　　　□ 不喜歡
   原因：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

4. 除了「看圖寫作」外，你建議何種寫作題型？請勾選(可複選)。

   □ 沒有其他建議　　□ 造句　　　□ 翻譯　　　□ 短文寫作
   □ 其他：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

5. 你比較喜歡哪一種寫作測驗方式？

　　☐ 選擇題　　　　　☐ 看圖寫作
　　原因：_____

6. 你認為哪一種測驗較困難？

　　☐ 選擇題　　　　　☐ 看圖寫作
　　原因：_____

7. 你認為四技二專統一入學測驗外語群專業科目(二)：英文習作，是否該加考英文寫作？

　　☐ 是　　　　　　　　☐ 否

8. 你認為四技二專統一入學測驗外語群專業科目(二)：英文習作，該採用何種測驗方式？

　　☐ 選擇題　　　　　☐ 英文寫作　　　　　☐ 選擇題＋英文寫作

Appendix J

Participants' Raw Scores of Direct and Indirect Writing Tasks

Participants No.	TSS	SI	SD	SR	Indirect Writing	Direct Writing
1	12.5	12.5	5.0	10.0	40.0	14.0
2	15.0	10.0	7.5	5.0	37.5	9.5
3	5.0	10.0	7.5	5.0	27.5	11.5
4	7.5	7.5	5.0	5.0	25.0	11.5
5	15.0	17.5	12.5	10.0	55.0	15.0
6	20.0	10.0	7.5	0.0	37.5	14.0
7	7.5	7.5	2.5	7.5	25.0	8.5
8	2.5	10.0	10.0	7.5	30.0	12.5
9	20.0	7.5	12.5	7.5	47.5	12.0
10	12.5	12.5	7.5	5.0	37.5	11.5
11	15.0	7.5	12.5	5.0	40.0	12.5
12	12.5	7.5	12.5	5.0	37.5	11.5
13	12.5	10.0	7.5	7.5	37.5	13.0
14	10.0	7.5	5.0	5.0	27.5	9.0
15	10.0	15.0	10.0	7.5	42.5	12.5
16	7.5	7.5	10.0	2.5	27.5	10.5
17	15.0	12.5	12.5	7.5	47.5	14.0
18	12.5	10.0	7.5	5.0	35.0	13.0
19	25.0	15.0	12.5	7.5	60.0	13.5
20	17.5	10.0	7.5	2.5	37.5	15.5
21	5.0	12.5	10.0	5.0	32.5	13.5
22	12.5	10.0	12.5	10.0	45.0	13.0
23	10.0	5.0	12.5	10.0	37.5	15.0
24	5.0	0.0	2.5	7.5	15.0	12.5
25	17.5	10.0	7.5	10.0	45.0	9.0
26	2.5	5.0	12.5	7.5	27.5	15.0
27	2.5	2.5	2.5	7.5	15.0	11.5
28	12.5	5.0	10.0	5.0	32.5	6.5
29	7.5	10.0	2.5	5.0	25.0	6.0
30	15.0	5.0	7.5	7.5	35.0	8.0
31	12.5	12.5	12.5	5.0	42.5	13.0
32	12.5	7.5	5.0	5.0	30.0	9.5
33	20.0	5.0	7.5	10.0	42.5	11.5

Participants No.	TSS	SI	SD	SR	Indirect Writing	Direct Writing
34	10.0	10.0	12.5	10.0	42.5	14.0
35	5.0	7.5	12.5	10.0	35.0	11.0
36	10.0	12.5	12.5	10.0	45.0	15.0
37	10.0	5.0	2.5	2.5	20.0	1.0
38	12.5	10.0	10.0	5.0	37.5	15.0
39	2.5	2.5	2.5	0.0	7.5	2.5
40	7.5	10.0	2.5	10.0	30.0	8.5
41	15.0	5.0	10.0	2.5	32.5	7.5
42	12.5	5.0	10.0	7.5	35.0	9.0
43	12.5	10.0	7.5	7.5	37.5	13.0
44	7.5	12.5	2.5	12.5	35.0	15.0
45	12.5	12.5	15.0	5.0	45.0	14.5
46	12.5	12.5	10.0	0.0	35.0	10.5
47	7.5	2.5	10.0	10.0	30.0	9.0
48	12.5	5.0	5.0	2.5	25.0	11.0
49	7.5	5.0	7.5	5.0	25.0	13.5
50	10.0	7.5	7.5	2.5	27.5	12.5
51	20.0	12.5	12.5	10.0	55.0	14.5
52	17.5	15.0	10.0	5.0	47.5	12.5
53	10.0	17.5	12.5	12.5	52.5	17.0
54	15.0	7.5	15.0	7.5	45.0	13.0
55	17.5	15.0	15.0	7.5	55.0	15.0
56	7.5	17.5	12.5	5.0	42.5	12.0
57	15.0	15.0	15.0	10.0	55.0	14.0
58	10.0	10.0	12.5	7.5	40.0	11.5
59	2.5	10.0	5.0	5.0	22.5	10.5
60	12.5	12.5	12.5	10.0	47.5	15.5
61	12.5	12.5	10.0	12.5	47.5	13.5
62	10.0	15.0	15.0	10.0	50.0	15.5
63	2.5	10.0	12.5	12.5	37.5	14.5
64	12.5	10.0	15.0	10.0	47.5	14.0
65	20.0	15.0	15.0	10.0	60.0	18.0
66	20.0	15.0	17.5	10.0	62.5	14.0
67	7.5	10.0	7.5	10.0	35.0	9.0
68	5.0	12.5	15.0	12.5	45.0	13.5
69	15.0	17.5	12.5	10.0	55.0	13.0

Participants No.	TSS	SI	SD	SR	Indirect Writing	Direct Writing
70	12.5	15.0	12.5	12.5	52.5	15.0
71	17.5	15.0	10.0	7.5	50.0	15.5
72	10.0	10.0	10.0	7.5	37.5	10.0
73	10.0	17.5	12.5	10.0	50.0	17.0
74	7.5	7.5	7.5	7.5	30.0	13.5
75	5.0	7.5	10.0	5.0	27.5	9.5
76	20.0	15.0	12.5	7.5	55.0	13.0
77	12.5	12.5	7.5	2.5	35.0	10.5
78	20.0	15.0	12.5	10.0	57.5	12.5
79	15.0	10.0	12.5	5.0	42.5	12.5
80	10.0	5.0	12.5	10.0	37.5	10.0
81	12.5	10.0	2.5	7.5	32.5	12.0
82	17.5	15.0	15.0	10.0	57.5	11.0
83	12.5	15.0	7.5	7.5	42.5	10.0
84	22.5	15.0	12.5	10.0	60.0	19.0
85	10.0	12.5	12.5	12.5	47.5	14.0
86	10.0	12.5	15.0	15.0	52.5	11.5
87	12.5	5.0	5.0	2.5	25.0	6.5
88	10.0	7.5	10.0	7.5	35.0	12.0
89	17.5	12.5	15.0	7.5	52.5	15.0
90	12.5	7.5	15.0	7.5	42.5	12.5
91	12.5	12.5	7.5	10.0	42.5	11.0
92	15.0	17.5	10.0	12.5	55.0	14.0
93	15.0	12.5	10.0	5.0	42.5	12.5
94	10.0	17.5	15.0	12.5	55.0	13.5
95	7.5	10.0	12.5	12.5	42.5	14.5
96	22.5	12.5	12.5	10.0	57.5	11.5
97	15.0	15.0	15.0	10.0	55.0	14.0
98	12.5	7.5	15.0	12.5	47.5	10.5
99	17.5	17.5	12.5	12.5	60.0	15.5
100	17.5	10.0	12.5	7.5	47.5	10.5
101	10.0	12.5	10.0	5.0	37.5	11.5
102	20.0	17.5	15.0	10.0	62.5	13.5
103	22.5	17.5	12.5	5.0	57.5	14.0
104	17.5	12.5	15.0	5.0	50.0	17.5
105	20.0	10.0	10.0	12.5	52.5	14.0

Participants No.	TSS	SI	SD	SR	Indirect Writing	Direct Writing
106	12.5	15.0	10.0	12.5	50.0	13.0
107	7.5	7.5	12.5	7.5	35.0	10.0
108	10.0	12.5	2.5	7.5	32.5	12.5
109	15.0	5.0	12.5	10.0	42.5	12.0
110	12.5	15.0	17.5	12.5	57.5	13.5
111	17.5	12.5	17.5	7.5	55.0	10.5
112	12.5	12.5	12.5	15.0	52.5	11.0
113	12.5	5.0	15.0	7.5	40.0	14.0
114	12.5	15.0	12.5	10.0	50.0	10.0
115	17.5	12.5	15.0	10.0	55.0	14.0
116	7.5	15.0	12.5	7.5	42.5	14.0
117	12.5	15.0	15.0	12.5	55.0	15.0
118	12.5	10.0	12.5	5.0	40.0	14.5
119	10.0	10.0	12.5	5.0	37.5	13.5