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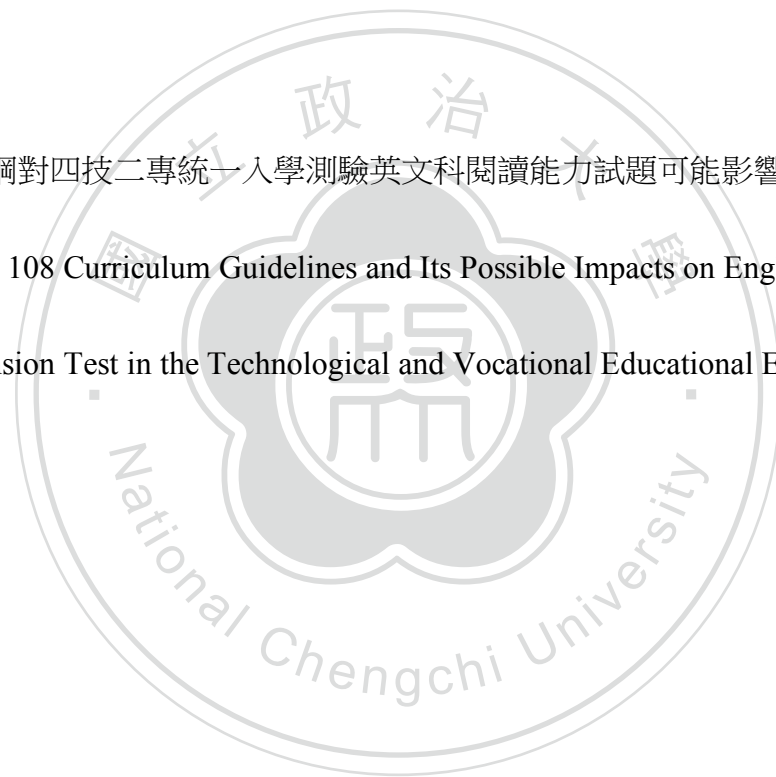
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108 課綱對四技二專統一入學測驗英文科閱讀能力試題可能影響之研究

A Study on 108 Curriculum Guidelines and Its Possible Impacts on English Reading

Comprehension Test in the Technological and Vocational Educational Examination



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To Dr. Hsueh-Ying Yu

獻給我的恩師尤雪瑛教授



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國立政治大學英國語文學系碩士在職專班

碩士論文提要

論文名稱：108 課綱對四技二專統一入學測驗英文科閱讀能力試題可能影響之研究

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論文提要內容：英文閱讀能力對外語學習者而言是重要的技能之一，為了解學習者的英文閱讀能力，英文閱讀測驗被廣泛地使用於各項考試中。在臺灣技職教育體系中，四技二專統一入學測驗是高職生升學的重要依據，而職業學校課程綱要則是課程設計與測驗評量的參考基準。本研究旨在比較新舊課綱中所敘述之英文閱讀能力的差異，透過分析統測英文科閱讀題組與高職英文課綱之吻合程度，討論在新課綱實施後未來試題可能的改變與影響。為了達成此研究目的，本研究分析近十年（2010-2019）統測英文閱讀題組以及 99 職業學校課程綱要，同時參考與測驗閱讀能力相關教學研究及論文，發展出「課綱檢核表」及「閱讀能力檢核表」作為研究工具。本研究結果顯示，相較於 99 課綱，108 課綱提及許多更具體且未在舊課綱被描述的閱讀能力。在近十年考題中英文科閱讀題組著重於檢視受試者「推論單字」、「了解常用句型」、「從文章中找出特定單字或片語」、與「辨別文章主旨」的能力。就未來考題方向而言，108 課綱實施後的試題可能會有更多與「自上而下的閱讀技巧」(Top-down skills) 相關的題目以及

「閱讀文本多元化」的改變。希冀藉由本研究之結果協助高職英文教師對於統測英文科閱讀題組與新課綱有更進一步的了解，使考試領導教學產生正面的回沖效應。

**關鍵字：**108 課綱、統測英文閱讀測驗、英文閱讀能力



## Abstract

English reading ability is one of the most important skills for foreign language learners. With the purpose of understanding learners' English reading proficiency, the reading comprehension test is widely used in different examinations. In Taiwan's vocational education system, the Technological and Vocational Educational Examination (TVEE) is a decisive criterion for vocational high school students to enter future technological universities. The Vocational High School Curriculum Guideline (VHSCG) is the reference benchmark for both courses design and teaching and assessment. This research aims to: (1) compare the differences between the old and new curriculum guidelines in terms of the statements of reading constructs; (2) analyze the reading comprehension of the TVEE from 2010 to 2019 and discuss how the tested constructs correspond to 99 VHSCG; and (3) discuss possible impacts on future TVEE. In order to achieve the purpose of this research, the study analyzed ten-year reading test items in the TVEE, and studied the previous literature about assessing reading ability and curricula to develop Curriculum Checklist and Reading Construct Checklist as instruments to analyze the targeted test items.

The analysis results of the present study indicate that first, the reading constructs listed in 108 VHSCG are more specific than those mentioned in 99 VHSCG. Second, the constructs of "Make propositional information or explanatory inferences," "Understand common sentence patterns," "Locate the specific words or phrases," and "Identify main ideas" are frequently-tested constructs in the past ten-year TVEE. Third, after the implementation of the 108 CG, more top-down skills may be emphasized in both cloze section and reading comprehension section and may adopt

more diverse texts in reading comprehension section. It is hope that the results of the study will help English teachers in vocational high school to get better understanding of the new curriculum guidelines and the reading test of the TVEE.

*Keywords:* 108 Curriculum Guidelines, English reading comprehension test in the Technological and Vocational Educational Examination, English reading constructs





## CHAPTER 1

### INTRODUCTION

#### **Background and Motivation**

In foreign language learning, reading is one of the most significant component of language learning that students need to acquire especially for academic and professional success. Through reading, students not only learn the linguistic knowledge but the world knowledge. Moreover, reading ability is often associated with listening, speaking, and writing because even in listening activities, oral interviews or writing assignments, students may be asked to complete certain tasks through reading as task input. Hence, reading is the fundamental skill in foreign language learning contexts. With no exception, English reading education has become an important issue in Taiwan's educational policy.

Most Taiwanese students have difficulties in English reading because of a lack of reading skills. For example, when reading, students often do word-by-word translations and desire to decode every word. It is easy for students to become anxious when they get stuck on a word that they are not familiar with. This is because students do not have the skill of guessing or inferring the unknown words by using clues from the context. Besides, lacking the reading skills such as identifying pronominal references or discourse markers, students may struggle with comprehending particular parts of a text. To read effectively, students need to acquire the knowledge of discourse structures and text coherence or they cannot fully understand what they are

reading but only get pieces of discrete information.

Since students need to master adequate reading skills to construct the meaning of the text and achieve reading comprehension, many reading skills are proposed. Such skills include lower-level process like identifying word meaning, and analyze sentences. The other higher-level skills include rhetorical skills. Students with both adequate lower-level and higher-level skills are more likely to become efficient readers.

The primary objective of reading test is to assess students' control in reading skills and reading comprehension. Reading comprehension items are mainly used to evaluate students' command of "literal comprehension, interpretive comprehension or referential comprehension, and critical comprehension" (Mohamad, 1999). The assessment of literal comprehension puts focus on whether students can find out the explicit messages stated in the text. The interpretive or referential comprehension emphasizes the ability of identifying the relationships among the ideas presented in the text. In other words, students are required to be able to recognize writer's intention, identify what kind of message is involved, or predict outcomes. As for the evaluation of critical comprehension, students may be asked to distinguish facts from opinions or recognize the persuasive argument development in the text (Mohamad, 1999). With the purpose of testing students' reading proficiency and identifying what skills students have and have not mastered, the reading test thus is used widely to test students' reading ability in almost every testing context from monthly exams in class to high-stakes exams for admission.

To vocational high school students, the Technological and Vocational Educational Entrance Examination (TVEE, hereafter) is an important test. TVEE is a

summative achievement test, which aims to evaluate whether students have learned what they should learn after three-year education in vocational high school. The result of the TVEE is a decisive criterion for technological universities to select their future students. To prepare students for the test, analyzing the reading comprehension items of the TVEE is necessary for teachers in vocational high school.

Assessment and curriculum are indispensable to the teaching and learning process, and they are inseparable. To analyze the TVEE, the content of the curriculum guidelines needs to be carefully explored as well. Statements of reading abilities and instructions listed in Vocational High School Curriculum Guidelines (VHSCG, hereafter) are important indicators to help teachers know how to develop or improve students' reading ability. What's more, the curriculum guidelines are also an important reference for the test content of TVEE.

The Grade 1-9 Curriculum (99 VHSCG, hereafter), announced in 2010, is the foundation for teachers to design teaching plans and assessments. In addition, 99 VHSCG is the basis of the test content of TVEE. The reading constructs listed in the curriculum guidelines are also the target skills to be tested in TVEE. For example, one of the listed abilities in 99 VHSCG is about being able to comprehend short stories and understand the main ideas; accordingly, the reading items of TVEE from 2010 put focus on measuring the skill of understanding the main ideas of short texts. With the announcement of the new Curriculum Guidelines of 12-Year Basic Education of Vocational High School (108 VHSCG, hereafter) in 2019, great public concerns have arisen, which led to heated discussion on teaching materials, student learning, syllabus design, instruction and, most importantly, assessment.

The idea of “core competencies” is regarded as the basis of new curriculum

development. It aims to help students encompass the knowledge, ability, and attitude to face future challenges. Though 108 VHSCG is derived from the 99VHSCG, the listed abilities are more specific. Many reading constructs are accentuated in the new guidelines. For instance, it emphasizes the use of discourse clues to infer the meaning of the words, or to get main ideas. The future reading test of TVEE may involve more items related to the discourse analysis and inference skills.

With the specification of 108 VHSCG, tests and assessments are bound to be modified and should be in line with the curriculum guidelines. 108 VHSCG was implemented in August 2019, but schools and teachers still have little clues on how the test of English reading comprehension section would develop. By analyzing the reading comprehension items of the TVEE from 2010 to 2019 (based on the 99 VHSCG) and by comparing the differences of the reading constructs listed in the 99 VHSCG and 108 VHSCG, teachers may have some ideas about possible changes and trends of future TVEE. But to date, little research has been done to compare the two curriculum guidelines or to analyze reading comprehension test items in the TVEE. As an English teacher in a vocational high school who intends to help fill up the gaps in the knowledge, the researcher intends to analyze the differences in reading constructs listed in the two curriculum guidelines and address what these differences can be reflected in the future TVEE.

### **Research Questions**

The research questions of this study are as follows:

1. What are the differences between 99 VHSCG and 108 VHSCG in terms of the statements of reading constructs?
2. What reading constructs are measured by the reading comprehension test of the

TVEE from 2010 to 2019 and how the tested constructs correspond to 99 VHSCG?

3. What changes can the new curriculum guidelines (108 VHSCG) bring about in future TVEE?

### **Significance of the Study**

The significance of the present study can be explained in three aspects. The first is to discover the differences of the reading constructs between the old and new curriculum guidelines. Secondly, the results of the study may provide a better understanding on what reading constructs are emphasized in TVEE from 2010 to 2019. Finally, for pedagogical application, since most teachers are still figuring out what possible changes future TVEE may face as 108 VHSCG was implemented, the results may help vocational high school teachers to design or modify their reading instructions to address the required reading abilities for students and prepare their students for future TVEE.



## CHAPTER 2

### LITERATURE REVIEW

This chapter includes four sections to review themes relevant to the present study. First of all, the history, the content, and the spirit of the curriculum guidelines are introduced in detail. Since curriculum and assessment are intricately intertwined, studies on the interaction between curriculum and assessment are discussed in this section as well. In the second section, an overview of reading will be reviewed with elaboration on reading process models. Besides, the skills and subskills of reading comprehension and the instructional approaches to reading will also be discussed in this section. After that, a general introduction of the TVEE is presented in the third section. In the last section, relevant research on reading test in Taiwan is reviewed, in particular the test of reading in the TVEE.

#### **Curriculum Design**

Curriculum provides guidance and structures for teachers, assessment designers, and textbook editors to plan syllabi, tests and materials for students to learn (Reys, Reys, Lapan, Holliday & Wasman, 2003); therefore, the importance of the curriculum is self-evident. A well-constructed curriculum articulates a sound and effective framework to foster and promote teaching and learning.

Curriculum design should be a cyclical process (Tyler, 2010). According to Brown (1995), curriculum development is an ongoing activity that educators intend to reach consensus for better education. To design and maintain the curriculum,

particularly for language curriculum, Brown proposed an approach consisting of six interrelated processes: needs analysis, objectives, testing, materials, teaching, and evaluation. Each process works together to achieve the goal of the curriculum. Similarly, Nicholls and Nicholls (2013) suggested the stages of curriculum designs are (1) setting objectives, (2) devising methods and choosing materials, (3) conducting assessment and (4) giving feedback to the objectives. Each stage is interrelated and interdependent.

In addition, a well-constructed curriculum requires constant feedback from assessment for modification. With a sound and effective curriculum, teachers start from analyzing what is necessary to satisfy the requirements for students' learning, and the results of the analysis can contribute to a set of objectives regarding the specific statements about cognition and skills that students should achieve. Then, to reach the objectives, teachers should consider how the teaching procedure and materials can be incorporated into the curriculum effectively. After teaching, by conducting assessments, teachers can understand whether the teaching and learning process is effective or not and then modify the process until the desired goal is accomplished (Tyler, 2010).

### ***Curriculum Guidelines***

According to the definition from the Ministry of Education (MOE, hereafter), curriculum guidelines are an important basis for formulating school curriculum teaching, textbooks, and entrance examinations. However, curriculum guidelines are not bounded by textbooks; instead, it is used to help teachers and students liberate from the dictatorship of the textbook (Yang, 2016). The curriculum guidelines are to set the “minimum educational standards” that students should learn for each subject at



each stage of learning. And it is also a guide that outlines the teaching objectives, materials and methods.

The development of curriculum guidelines is an evolutionary process which implies the historical background and social changes of a country. There is neither a set model for the development of the curriculum nor a perfect one in the history of education. Not until the numerous discussions and negotiations are held can the curriculum guidelines gradually be constructed (Lee, 2010).

The curriculum guidelines in Taiwan have also undergone many discussions and changes. Since 1968, the implementation of the Nine-Year Education laid a good foundation for Taiwan's education. Faced with the changes brought about by globalization and internationalization, curriculum must respond to social needs and challenges (MOE, 2014). According to National Academy for Educational Research (NAER, hereafter), many countries in the world make major adjustments in the curriculum guidelines in every eight to ten years. In Taiwan, the 99 Curriculum Guidelines (99 CG, hereafter) went into effect in 2010 after several seminars and discussions. The educational goal of the 99 CG is to develop basic abilities, and leads students to become modern citizens and be able to conduct lifelong learning. In 2019, a new Curriculum Guidelines of 12-Year Basic Education was implemented. It is based on the principle of whole-person education, with the major concepts of “taking the initiative”, “engaging the public” and “seeking the common good” (NAER, 2019; Zeng, 2017).

Generally speaking, the curriculum guidelines in Taiwan consist of several parts: (1) background, (2) fundamental beliefs, (3) educational goals, (4) course objectives, (5) learning phases, and (6) course frameworks. There are two main parts in the

course frameworks. One is subject introduction and the other is syllabus. The credits allocation and the general description of the course are clearly mentioned in the subject introduction part. On the other hand, there are several important detailed elements presented in the syllabus part: (1) the name of the subject, (2) the classification of the subject, (3) the credits of the subject, (4) the prior knowledge students should possess, (5) the course objectives, (6) the teaching outlines including unit themes, content outlines, and time allocation, and (7) the implementation points including teaching materials, teaching methods, evaluation and assessment, teaching resources and competence indicators. The content covers all core components of a complete curriculum.

### ***The Revised Background of 99 CG***

With the advent of 21<sup>st</sup> century, countries around the world were committed to education reforms for the purpose of improving the quality of their citizens and enhancing national competitiveness. The MOE conducted curriculum and teaching reforms based on the “Education Reform Action Plan” approved by the Executive Yuan in 1997. In view of the needs of national development and the expectations from the society, 99 CG replaced the High School Revision Provisional Curriculum Guidelines (95 Curriculum Guidelines).

99 CG regards education as the process of developing students’ potential and helping students to adapt to and improve their living environment. The Nine-Year Education should be able to develop students’ humanistic literacy, integration ability, democratic knowledge, local and international awareness, and lifelong learning. To achieve the above goals, 99 CG proposes eight features that are different from 95 Curriculum Guidelines, including (1) cultivating basic abilities required by modern

citizens, (2) promoting cross-discipline teaching rather than single-discipline teaching, (3) developing school-based courses, (4) designing more tailor-made materials to reduce dependence on textbooks, (5) integrating curriculum, teaching, and assessment, (6) implementing English teaching in the fifth grade of elementary school and encouraging learning other foreign languages, (7) reducing learning hours at school to release students' burden, and (8) eliminating centralized curriculum control and giving school more spaces to design their own courses (MOE, 2010).

### ***The Revised Background of 108 CG***

In 2010, the “Eighth National Education Conference” indicated that it was necessary to launch the 12-Year Basic Education to accommodate the principles of “universal,” “non-compulsory,” “quality guarantee,” and “social justice.” With a view to meeting the trend of world education development, in September, 2010, the Executive Yuan formally approved the “Twelve-Year National Basic Education Implementation Plan”. The curriculum development of the 12-Year Basic Education is based on the spirit of holistic education, emphasizing that education should guide students to be spontaneous learners. Through learning, students are able to properly interact with themselves, others, society, and nature. Besides, school education should assist students to apply and practice what they have learned to experience the meaning of life, and be willing to contribute to the sustainable development of society and nature to seek mutual goodness.

Guided by the aforementioned goals, four objectives are set to assist students in learning and development. The first is inspiring students' life potential, including cultivating the motivation of learning, curiosity, exploration, and critical thinking. Students are willing to learn with a positive attitude to experience the joy of learning

and gain a sense of achievement. Second, acquiring life knowledge can help students learn to integrate their knowledge with the skills to solve problems. Besides, appropriate communication and expression, interpersonal tolerance, teamwork and social interaction, technology application, and aesthetics appreciation are all highlighted as well. Third, guiding students to develop appropriate career plan is another goal. Students should develop professional skills and positive working attitude for future career. Having the courage to face future challenges and world trends are indispensable abilities. Finally, the fourth goal is cultivating civic responsibilities, and building up democratic literacy, human rights, and national identity. Students should be able to respect multiculturalism and pursue social justice. Caring for nature, and cherishing life and natural resources are the mutual goodness students should possess. To sum up, 108 CG expects that through the above four goals listed in the 12-Year Basic Education, we can achieve the ideal of whole-person education (MOE, 2014).

### ***The Role of Assessment in Curriculum***

According to Mousavi (2009), assessment is “appraising or estimating the level or magnitude of some attribute of a person” (as cited in Brown, 2010, p.3). In education, assessment refers to a wide variety of scientific methods and techniques that educators use to collect students’ learning progress, skill acquisition, learning performances, and achievements. In particular, the purpose of assessment in current Taiwanese schools is to analyze teaching process and diagnose students’ learning difficulties as the basis for implementing remedial teaching and individual tutoring. Besides, the results of the assessment can be used to place students into different levels of course or school. (Brown, 2010).

As stated above, assessment is an ongoing process. The interaction between curriculum and assessment is dynamic and inseparable. Hughes (2003) mentioned that without accurate measurement of students' learning performances, it is difficult to make rational educational decisions. Assessment either formative or summative can help teachers check on the progress of their students, see how far students have mastered, realize what has been achieved and the most importantly, use the collected information to modify the future teaching plans or even curricula. In other words, the constant interaction between curriculum and assessment are the indispensable part in curriculum design.

### **An Overview of Reading**

The nature of reading is complex. There have been various definitions and views of reading process depending on different readers or different purposes for reading. Each purpose may require different reading processes and skills. Nuttall (1982) suggested that reading is to get whatever message that the writer is expected to convey. Anderson, Reder, and Simon (1985) regarded reading as an orchestra because reading is a complicated skill which needs a number of subskills to coordinate and produce meaning. Grabe (1991, p 379) explained that the complex reading process could be divided into at least six component skills to explain the fluent reading process: "(1) automatic recognition skills, (2) vocabulary and structure knowledge, (3) formal discourse structure knowledge, (4) content/ world background knowledge, (5) synthesis and evaluation skills/ strategies, and (6) metacognitive knowledge and skills monitoring. Similarly, Urquhart and Weir (1998) considered reading involves all the cognitive processes such as lexical knowledge, syntactic knowledge, and background knowledge. Generally speaking, the definitions of reading explain the

components of reading that are involved when we read.

### ***Reading Process Models***

In terms of the theories of reading process, the bottom-up model, the top-down model, and the interactive model are the three approaches discussed most. In 1970s, cognitive psychologists proposed the bottom-up approaches and the top-down approaches to explain the reading process happened in mind, and in later development, the interactive approaches have been proposed (Urquhart and Weir, 1998). Following are descriptions of the three models.

Gough (1972) considered the bottom-up model as a serial decoding processes. The readers pay close attention to the printed text, recognize the letters, sounds and words, and then decode meaning from the smallest unit to the larger unit such as clauses and sentences. In other words, the bottom-up model emphasizes lexical grammatical rules, which is sometimes called lower-level process (Urquhart & Weir, 1998; Grabe, 2000; Grabe & Stoller, 2002). Readers who use the bottom-up model or the lower-level process are seen as decoders who follow the order of “graphic-phonemic-syntactic-semantic” systems to read the text (Alderson, 2000).

Goodman (1970) offered a top-down model which indicated that readers actively bring hypotheses about the text, guess or predict the meaning of the text and use their prior knowledge related to the text to achieve comprehension. Top-down model emphasizes the abilities of getting the gist, identifying sources, making inference, and connecting ideas in the text. Besides, top-down model stresses the importance of the schemata, that is, the background knowledge or the prior knowledge (Alderson, 2000).

Readers rely on only bottom-up or top-down approach would face difficulty in comprehending a text (Grabe, 2000; Richards & Schmidt, 2002; Grabe & Stoller, 2002). Rumelhart (1976) considered reading process requiring all the knowledge sources including bottom-up model and top-down model, which is called the interactive model. According to Coady (1979), this interactive model contained “conceptual abilities, background knowledge, and process strategies”. In other words, the interactive model involves the combination of the bottom-up approaches and the top-down approaches (Alderson, 2000). With the skills of interactive approaches, readers can use linguistic knowledge to integrate information and apply adequate background knowledge to make interpretations or inferences from the text. In addition, efficient readers know how and when to shift between bottom-up and top-down models of processing (Carrell, 1988; Grabe, 1991).

### ***The Skills and Subskills of Reading Comprehension***

Reading comprehension is a complex cognitive process. Researchers find that such a process could be divided into several “underlying skills components” that can further explain what is involved when we read (Grabe, 1991). Hence, the focus on “skills” can be seen as a development of analyzing the comprehension process in an attempt to make the rather vague concept become more attainable (Urquhart & Weir, 1998).

Many researchers (Davis, 1968; Luner et al., 1979; Munby, 1978; Nuttall, 1982; Grabe, 1991; Hughes, 2003; Brown, 2010) proposed their own taxonomies for reading skills or subskills. Although they may use different words or phrases to describe the concept of the certain reading skills, the ideas about reading skills are basically similar. The researcher will briefly introduce Nuttall’s (1982), Brown’s

(2010) and Hughes' (2003) taxonomy.

Many reading pedagogy researchers adopt Nuttall's (1982) Text-attack Skills to examine reading process. Nuttall divided the reading skills into 8 subskills of lower-level process and higher-level process. They are: (1) understanding the syntax, (2) recognizing and interpreting cohesive devices, (3) interpreting discourse markers, (4) recognizing functional value, (5) recognizing text organization, (6) recognizing the presuppositions underlying the text, (7) recognizing implications and making inferences, and (8) predicting.

Brown (2010) listed 7 microskills and 7 macroskills to represent the crucial consideration in assessing reading. The microskills contain the ability in lexical and syntactic levels which is related to the bottom-up approaches. On the other hand, the macroskills can be related to the ability of top-down approaches like inferring the implied meanings or using appropriate schemata. Table 2.1 shows Brown's micro- and macroskills for reading comprehension



**Table 2.1***Brown's (2010) Micro- and Macroskills for Reading Comprehension (pp.187-188)*

| <b>Microskills</b>  |
|---|
| 1. Discriminate among the distinctive graphemes (letters or letter combinations that produce a phoneme) and orthographic patterns of English.   |
| 2. Retain chunks of language of different lengths in short-term memory.   |
| 3. Process writing at an efficient rate of speed to suit the purpose.   |
| 4. Recognize a core of words and interpret word order patterns and their significance.  |
| 5. Recognize grammatical word classes (nouns, verbs, etc.), systems (e.g., tense, agreement, pluralization,) patterns, rules, and elliptical forms.   |
| 6. Recognize that a particular meaning may be expressed in different grammatical forms.   |
| 7. Recognize cohesive devices in written discourse and their role in signaling the relationship between and among clauses.  |
| <b>Macroskills</b>  |
| 1. Recognize the rhetorical conventions of written discourse and their significance for interpretation.   |
| 2. Recognize the communicative functions of written texts, according to form and purpose.   |
| 3. Infer context that is not explicit by acting schemata (using background knowledge).  |
| 4. From described events, ideas, etc., infer links and connections between events, deduce causes and effects, and detect such relations as main ideas, supporting ideas, new information, given information, generalization, and exemplification. |
| 5. Distinguish between literal and implied meanings.  |
| 6. Detect culturally specific references and interpret them in a context of the appropriate cultural schemata.  |
| 7. Develop and use a battery of reading strategies, such as scanning and skimming, detecting discourse markers, guessing the meaning of words from context, and activating schemata for the interpretation of texts.                              |

Hughes (2003) presented reading skills from the perspective of testing and specifically listed the skills that learners are expected to acquire. The skills in turn become the targets of testing. Since the present study aims to analyze the abilities tested in TVEE, Hughes' list of reading abilities for testing best serve the purpose of this study. The researcher thus adopts Hughes' (2003) Careful Reading Operations as the main analysis framework for the study. Table 2.2 presents Hughes' (2003) Careful Reading Operations.

**Table 2.2**

*Hughes' (2003) Careful Reading Operations (pp.139)*

| <b>Hughes' (2003) Careful Reading Operations</b>  |
|---|
| 1. Identify pronominal reference  |
| 2. Identify discourse markers   |
| 3. Interpret complex sentences  |
| 4. Interpret topic sentence   |
| 5. Outline logical organization of a text   |
| 6. Outline the development of an argument   |
| 7. Distinguish general statements from example  |
| 8. Identify explicitly stated main ideas  |
| 9. Identify implicitly stated main ideas  |
| 10. Recognize writer's intention  |
| 11. Recognize the attitudes and emotions of the writer  |
| 12. Identify address or audience for a text   |
| 13. Identify what kind of text is involved (e.g. editorial, diary, etc.)  |
| 14. Distinguish fact from opinion   |
| 15. Distinguish hypothesis from fact  |
| 16. Distinguish fact from rumor or hearsay  |
| 17. Infer the meaning of an unknown word from context   |
| 18. Make propositional information inferences, answering questions beginning with who, when, what   |
| 19. Make propositional explanatory inferences concerned with motivation, cause, consequence and enablement, answering questions beginning with why, how |
| 20. Make pragmatic inferences   |

According to Hughes (2003), unlike productive skills, reading skill as a perceptive skill does not demonstrate visible behaviors during the reading process. Only through reflection can readers explain what they have experienced or performed. Research methods like questionnaire, interview, and observation provide information about reading process from different perspectives. Based on the previous findings, Hughes thus proposed 20 essential indicators of reading skills for the test of reading ability. The specifications of the Careful Reading Operations will be discussed in Chapter 3, the Methodology part.

### ***Instructional Approaches to Reading Comprehension***

Extensive reading has been regarded as one of the most successful instructional

approaches to ESL or EFL learners. Inspired by Krashen's Input Hypothesis, many researchers have noticed the pedagogical value of extensive reading. Some connect extensive reading with "skimming and scanning", others consider it to "quantity of material" (Alyousef, 2006). Hafiz and Tudor (1989) indicated that extensive reading is based on the concept that readers immersed in a large number of meaningful and interesting reading texts will develop beneficial effects on reading proficiency.

Through extensive reading, readers can "develop good reading habits, build up knowledge of vocabulary and discourse structure, and encourage a liking for reading" (Richard & Schmidt, 2002: 193-194). Therefore, extensive reading is regarded as an effective approach to accumulate linguistic knowledge and increase reading speed and comprehension (Manson & Krashen, 1997; Bell, 2001; Alyousef, 2006; Shen, 2008).

Based on the concepts of extensive reading, many researchers propose various teaching methods and strategies. Day (2002) discussed ten principles for conducting extensive reading practice: (1) The reading material is easy; (2) A variety of reading material on a wide range of topics must be available; (3) Learners choose what they want to read; (4) Learners read as much as possible; (5) The purpose of reading is usually related to pleasure, information and general understanding; (6) Reading is its own reward; (7) Reading speed is usually faster rather than slower; (8) Reading is individual and silent; (9) Teachers orient and guide their students; and (10) The teacher is role model of a reader. The ten principles address issues of readers' motivation and cognition, teachers' responsibilities, and text selection. Teachers introduce extensive reading by guiding students to choose what to read. Students' reading experiences are important for extensive reading, hence, there is usually no comprehension questions followed by reading. But teachers can ask students to write

about some related questions such as “Who is your favorite character?” to extend reading experiences. Similarly, Hedge (2003) said that “a well-motivated and trained teacher” and “authentic texts” are important factors to extensive reading program. A well-motivated trained teacher would know how to select appropriate materials to motivate students to read. The well-trained teachers are able to choose either “pedagogic” or “adapted” texts to help students become independent readers in view of students’ needs and competence. Besides, when doing extensive reading, teachers may provide authentic reading materials for students to read, which can engage students in real reading situations.

Unlike extensive reading, in school education, for the purpose of ensuring learning results, students usually engage in intensive reading to explore specific vocabulary, and syntactic, semantic and discourse structures to comprehend as much meaning from the reading texts as possible. The purpose of intensive reading is to ask students to pay close attention to the text (Nuttall, 1996). In intensive reading activities, the role of teachers is important. Teachers should first decide the learning objectives and take variety of topics into account to provide students with appropriate texts. The texts for intensive reading are usually shorter and followed by comprehension questions.

To achieve intensive reading, many researchers suggest different instructional methods. Narrow reading approach is one of them. Narrow reading refers that each writer has his or her own way of expressions and writing styles; therefore, teachers can choose reading texts by focusing on specific writing styles or topics to let students learn the essence of the words, phrases and structures (Krashen, 2004). Carrell et al (1989) emphasized two metacognitive approaches for intensive reading, semantic

mapping and experience-text-relationship. Semantic mapping is a “categorical structure of information in graphic form” (Johnson, 1986). The experience-text-relationship aims at “reading for meaning”. First, teachers guide students to discuss their previous experiences that are related to the text as warm-up activities. Second, teachers ask students to read the text and explain what has been done in the while-reading stage. After reading, teachers would ask some questions about the content. Teachers can correct the misunderstood parts by relating to evidence in the text for students. Finally, teacher help students to connect what they have read with their real-life experiences and knowledge (Carrell, Pharis & Liberto, 1989).

Reading for fluency or reading for accuracy is a dilemma that most teachers might encounter when designing the teaching plan. Although some believe that extensive reading and intensive reading are opposite to each other, Nuttall (1996) stated that “intensive and extensive reading are complementary and both are necessary” (p.23). The two reading strategies are not in confronting positions but are interrelated and overlapping. Based on the purposes, teachers may use either shorter texts for profound understanding or longer texts for training reading speed. For example, for elective course at school, teachers can assign students to complete a book for extensive reading. In this case, teachers do not always teach passages of textbooks that usually follow unified format of the textbook. Reading for both fluency and accuracy should receive equal attention; after all, they are the key to success reading.

### **An Overview of the TVEE**

TVEE has been the main standardized entrance exam for vocational high school graduates since 2001. TVEE is not only an achievement test but also a norm-

referenced test, which compares one student's performance with that of other students. Therefore, the result of the TVEE is a decisive criterion for technological universities to select their future students.

Because of the importance of the TVEE, MOE assigned National Yunlin University of Science and Technology (NYUST, hereafter) to set up the Testing Center for Technological and Vocational Education (TCTE, hereafter), as a specialized institution of constructing tests in 1998. Meanwhile, National Taipei University of Technology (NTUT, hereafter) is responsible for establishing the Committee of Recruitment Policy Advancement for Technological Colleges and Universities. The mission of this institute is to coordinate the admission procedure, review the admission policies, and work on future development.

TVEE is established and administered by the TCTE. The content of the test is based on the competence indicators listed in VHSCG. VHSCG defines the requirements that students should acquire on each subject at each learning phase. It is not only the essential ground for vocational high school education but also the principal guidelines for examinations and textbooks.

Since the announcement of 99 VHSCG in 2010, the English test types of the TVEE has gone through three major changes to meet the purpose of examining students' language ability. The following presents detailed development of the test.

From 2010 to 2014, the test consisted of 50 multiple choices in total, which are divided into four test types: 15 vocabulary items (7 blank-fillings and 8 synonym-selections), 10 dialogue items, 15 cloze items with three short articles, and 10 reading comprehension check items along with two to three articles.

In 2015, a non-multiple choices section was incorporated into the test to examine

the writing ability. It contained two parts, four filling the blank items and one rearranging scrambled sentence. The vocabulary section was reduced to 10 items (6 blank-fillings and 4 synonym-selections), and one article was deleted in cloze section with 10 items in total.

From 2016 to 2019, the test was composed of 41 multiple choices and four non-multiple choices. The vocabulary section has 11 items (7 blank-fillings and 4 synonym-selections). As for non-multiple choices section, two filling the blank items was reduced and one Chinese to English sentence translation test type was added.



**Table 2.3**

*The English Test Types of the TVEE from 2010 to 2019*

| Types<br>Year | Multiple Choices |          |       |                       |                  | Non-multiple Choices |                          |  |  |
|---------------|------------------|----------|-------|-----------------------|------------------|----------------------|--------------------------|--|--|
|               | Vocabulary       | Dialogue | Cloze | Reading Comprehension | Filing-the-blank | Sentence Rearrange   | Translation <sup>1</sup> |  |  |
| 2010          | 15               | 10       | 15    | 10                    | 0                | 0                    | 0                        |  |  |
| 2011          | 15               | 10       | 15    | 10                    | 0                | 0                    | 0                        |  |  |
| 2012          | 15               | 10       | 15    | 10                    | 0                | 0                    | 0                        |  |  |
| 2013          | 15               | 10       | 15    | 10                    | 0                | 0                    | 0                        |  |  |
| 2014          | 15               | 10       | 15    | 10                    | 0                | 0                    | 0                        |  |  |
| 2015          | 10               | 10       | 10    | 10                    | 4                | 1                    | 0                        |  |  |
| 2016          | 11               | 10       | 10    | 10                    | 2                | 1                    | 1                        |  |  |
| 2017          | 11               | 10       | 10    | 10                    | 2                | 1                    | 1                        |  |  |
| 2018          | 11               | 10       | 10    | 10                    | 2                | 1                    | 1                        |  |  |
| 2019          | 11               | 10       | 10    | 10                    | 2                | 1                    | 1                        |  |  |

<sup>1</sup> The translation item is Chinese to English sentence translation.



Basically, over the last decade, the changes of TVEE are minor. Despite the fact that the number of cloze items decreases, the sections and the nature of items remain the same. However, the addition of written item types of filling the blank, rearranging sentences, and sentence translation did cast impacts on English teaching when they were first introduced in the test.

### **Research on Reading Test in Taiwan**

Reading test has accounted for a large proportion of English proficiency test and it has been adopted in various contexts, from monthly exams to high-stake test. Some research addressed the topic on reading test of the General Scholastic Ability English Test (GSAET, hereafter) and the Advanced Subjects English Test (ASET, hereafter) in Taiwan (Huang, 1997; Chou, 2009; Liu, 2009; Chen, 2009; Lu, 2003; Liu, 2009; Liu, 2017) but little research has been done to analyze reading test of the TVEE (Lu, 2003; Liu, 2009). The following will firstly review relevant research on reading test including cloze and reading comprehension section of GSAET and ASET, and then the relevant research on reading test of the TVEE.

For cloze test, Huang (1997) and Chou (2009) both found that global items related to contextual clues were less emphasized in high-stakes testing. Huang found that the global items only accounted for 16.33% (40 out of 205 items) in the test of Joint College Entrance Exam (JCEE, the former name of the ASET) from 1982 to 1993. The results revealed that JCEE put much emphasis on local items related to clause or sentence level. He suggested that test designers should balance both global and local items to measure students' language ability. Similarly, Chou (2009) found that only 22% and 31% of the cloze items in GASET and ASET were classified as global items in the cloze test of GASET and ASET from 2004 to 2008. The findings

of the two studies revealed that instead of measuring students' integrative skills, the two nationwide and high-stake exams tended to measure students' discrete-point skills in the cloze test.

As for reading comprehension section, Liu (2009) found that *Comprehending Literal Meaning, Recognizing and Interpreting Cohesive Device, Recognizing Functional Value, Recognizing Implications and Inferences, Interpreting, and Reorganizing* were the reading skills mainly measured in the GSAET and ASET from 2004 to 2008. In addition to the abovementioned six reading skills, *Recognizing Style and Tone* was identified in the ASET. Likewise, Chen (2009) studied the reading skills measured in the GSAET and ASET from 2002 to 2007. By using both qualitative and quantitative analyses, she found out that the items most frequently tested in the GSAET and ASET were items on *Recognizing and Interpreting Details*; however, *Recognizing Text Organization* was the least tested skill. Besides, *Word Inference from Context* and *Recognizing and Interpreting Details* items occurred every year in the GSAET.

In the study of examining the construct validity of the vocabulary, cloze, and reading comprehension items, Liu (2017) found that *Lexical Meaning, Morphosyntactic Form, Morphosyntactic Meaning, and Cohesive Form and Meaning* were four main features presented in the cloze section in the GSAET from 2015 to 2016. As for the reading comprehension sections, *Interpreting, Summarizing, and Inferring* were emphasized. She suggested that English teachers should design more reading instructions related to macro-level textual practice, involving the ability of processing context with clues like discourse markers or cohesive ties.

In terms of the exam for vocational high school students, Lu (2003) studied the

test quality of the English Test of Entrance Examination for Four-Year Technological Colleges (EEFTC) for cloze and reading comprehension from the school years of 1998 to 2002. The study mainly focused on four parts: readability grade levels, word difficulty levels, item characteristics, and ratio between the number of words and number of items to understand the quality of the EEFTC. In the study, Lu found that the readability grade levels of the test are far beyond the moderate grade levels, and the words used in the test primarily covered the vocabulary size of 3500 words (level three to five). Concerning the item characteristics, the items in the cloze section tested relatively more local comprehension skills while the items in reading comprehension section measured more global skills. As for the ratio between the number of words and number of items, the word numbers and items have increased gradually, especially since the school year of 2001.

In addition, Liu (2009) investigated the development of the TVEE English test and its interaction with the curriculum guidelines from 1992 to 2008. According to the stages of the curriculum guideline development, there were three major findings in her study. First, the 1992 to 1997 TVEE mainly focused on memory and language elements rather than global comprehension ability. Secondly, the 1998 to 2000 TVEE stressed the integrative ability more because the curriculum guideline at this stage encouraged communicative language teaching. Thirdly, the test of the TVEE from 2001 to 2008 had undergone the greatest reform. The TVEE at this stage emphasized the importance of the context, global comprehension, and integrative skills.

The previous studies show that curriculum guidelines have great influences on entrance exam. As the new 108 CG is issued, the researcher anticipates it will certainly have impacts on TVEE. Therefore, this study aims to find out differences

between the new and the old curriculum guidelines in the first place. Second, the researcher will analyze the correspondence between TVEE and 99 VHSCG. Then possible impacts of 108 VHSCG on future TVEE will be discussed. Finally, teaching implications will be discussed in the present study.



## CHAPTER 3

### METHODOLOGY

This chapter consists of data collection, analysis framework, data coding procedure, inter-rater reliability and exemplification of data coding. The present study aims to answer the three research questions addressed in the Introduction part. The first question aims to compare 99 VHSCG and 108 VHSCG in terms of reading constructs. The second question is what reading constructs are measured by the reading comprehension test of the TVEE from 2010 to 2019 and how do the tested constructs correspond to 99 VHSCG. The last question is what changes 108 VHSCG can bring about in the future TVEE.

In order to answer the three research questions, first, the researcher analyzed two kinds of data for comparison: one was 99 VHSCG, and the other was 108 VHSCG. Second, the researcher used the competence indicators stated in 99 VHSCG as the first checklist to analyze reading constructs measured by the reading comprehension of the TVEE. Third, the researcher designed a second checklist modified primarily from Hughes' (2003) Careful Reading Operations as another instrument to further analyze the items of reading comprehension and find out what reading constructs are measured in the TVEE. Finally, the researcher discussed possible changes in the future TVEE based on the findings in the present study.

#### **Data Collection**

The data used in this study consisted of two parts: VHSCG and TVEE items. The

researcher specifically addressed three parts related to English teaching respectively from 99 VHSCG and 108 VHSCG, including (1) overall vocational school educational goals, (2) English curriculum goals, and (3) English competence indicators of reading in 99 VHSCG and English learning performances of reading in 108 VHSCG. Among them, the competence indicators and learning performances of reading were the core research data in the present study and therefore the researcher particularly listed them in this section. For the test items, the present study included (1) the cloze items of the TVEE from 2010 to 2019, and (2) the reading comprehension items of the TVEE from 2010 to 2019. The 99 VHSCG and 108 VHSCG were collected from the website of National Academy for Educational Research; the test items were collected from the website of the Testing Center of Technological and Vocational Education. The following presents detailed information of the data.

First, according to 99 VHSCG, the overall educational goals are teaching professional knowledge, cultivating professional ethics, and developing practical technical talents. As for English, the objectives of the course are to (1) assist students to apply English words and grammar to the communication of reading, writing, listening, and speaking, and (2) help students develop effective learning methods and correct learning attitudes. The competence indicators in 99 VHSCG state five abilities for reading skills for the learners to acquire in the entire three years. First, recognize the cursive writing (handwriting) of the English alphabet. Second, understand English notes, signs and instructions. Third, comprehend short stories and understand the main ideas. Fourth, comprehend simple letters or messages. Fifth, look up the dictionary or other reference book to read extracurricular books autonomously. Table

3.1 presents the competence indicators of reading in 99 VHSCG.

**Table 3.1**

*The Competence Indicators of Reading in 99 VHSCG*

| <b>The Competence Indicators of Reading in 99 VHSCG</b>                                       |
|---|
| 1. Recognize the cursive writing of the English alphabet.                                     |
| 2. Understand English notes, signs, and instructions.   |
| 3. Comprehend short stories and understand the main ideas.                                    |
| 4. Comprehend simple letters or messages.   |
| 5. Look up the dictionary or other reference book to read extracurricular books autonomously. |

Second, according to 108 VHSCG, the overall educational objectives are cultivating core competencies and shaping modern citizens, strengthening basic knowledge and developing lifelong learning, cultivating professional skills to achieve professional needs, and cultivating moral character and enhancing personal values. As for English, the objectives of the course are to (1) improve listening, speaking, reading, and writing skills for communication and interaction in life and workplace, (2) promote effective learning methods to strengthen self-learning ability for lifelong learning, (3) enhance self-confidence and interest in learning and cultivate an attitude of active learning, (4) understand and respect different cultures, and (5) cultivate the ability of logical thinking and innovation. Compared with the indicators listed in 99 VHSCG, the learning performances stated in 108 VHSCG contains eleven abilities which are more detailed and specific. Table 3.2 presents the detailed learning performances.

**Table 3.2**

*The Learning Performances of Reading in 108 VHSCG*

| <b>The Learning Performances of Reading in 108 VHSCG</b>   |
|--|
| 1. Identify the words learned in class.  |
| 2. Understand the common English signs.  |
| 3. Understand common charts.   |
| 4. Understand common daily English expressions.  |
| 5. Understand common sentence patterns.  |
| 6. Understand the content of short articles and letters.   |
| 7. Understand the content and plots of short stories.  |
| 8. Identify the elements of a story, for example, background, characters, events, and ending.  |
| 9. Infer the meaning of the words or the sentences by using the word structures, context, sentence structures, and discourse structures. |
| 10. Guess the meaning of the words and infer the meaning from the pictures or graphs.  |
| 11. Understand common charts and manuals used in the workplace.  |

As for the data of the test items, the researcher included the cloze items as a part of data for analysis because in a broad sense, the cloze tests are also a test of reading ability. The cloze tests have been constructed in many ways for many purposes to measure language proficiency. According to Oller (1973), a wide variety of research supported the cloze tests as a measurement to evaluate “readability, reading comprehension, quality of translations, pragmatic expectancies due to textual illustrations, attitudes, and ethno-linguistic background”. In addition, Bachman (1982) concluded that the cloze tests are used to measure syntactic and discourse structure in a text. As stated above, the cloze tests are useful for measuring both lower-level skills and higher-level skills in reading. Therefore, the researcher included the cloze items as the data to analyze what reading constructs are tested in the TVEE.

For data collection, the cloze section of the TVEE from 2010 to 2019 comprises a total of 25 reading passages and 125 items. Each reading passage contains five to eight items and each item is presented in the form of multiple choices. The average



word count of each reading passage is 150 words (range: 106 to 200). In terms of the topics of the reading passages, they are mostly related to science and technology, interpersonal relationships, life experiences, and culture and customs. Table 3.3 presents the detailed information for cloze items of the TVEE from 2010 to 2019.



**Table 3.3**

*The Detailed Information for the Cloze Items of the TVEE from 2010 to 2019*

| <b>The Detailed Information for the Cloze Items of the TVEE</b> |                                 |                           |                          |  |                         |
|---|---------------------------------|---------------------------|--------------------------|--|-------------------------|
| <b>Detail</b><br><b>Year</b>                                    | <b>Reading Passages Numbers</b> | <b>Test Items Numbers</b> | <b>Word Counts</b>       | <b>Topics</b>                          | <b>Total Test Items</b> |
| <b>2010</b>   | 1                               | 5                         | 124                      | Culture and customs                    | 15                      |
|   | 1                               | 5                         | 146                      | Literature and art                     |                         |
|   | 1                               | 5                         | 147                      | Ecological and environmental education |                         |
| <b>2011</b>   | 1                               | 5                         | 131                      | Life experience                        | 15                      |
|   | 1                               | 5                         | 184                      | Interpersonal relationship             |                         |
|   | 1                               | 5                         | 106                      | Science and technology                 |                         |
| <b>2012</b>   | 1                               | 5                         | 158                      | Culture and Customs                    | 15                      |
|   | 1                               | 5                         | 163                      | Interpersonal relationship             |                         |
|   | 1                               | 5                         | 157                      | Science and technology                 |                         |
| <b>2013</b>   | 1                               | 5                         | 176                      | Science and technology                 | 15                      |
|   | 1                               | 5                         | 169                      | Employment                             |                         |
|   | 1                               | 5                         | 179                      | Science and technology                 |                         |
| <b>2014</b>   | 1                               | 7                         | 146                      | Life experience                        | 15                      |
|   | 1                               | 8                         | 200                      | Life experience                        |                         |
| <b>2015</b>   | 1                               | 5                         | 143                      | Interpersonal relationship             | 10                      |
|   | 1                               | 5                         | 171                      | Interpersonal relationship             |                         |
| <b>2016</b>   | 1                               | 5                         | 134                      | Interpersonal relationship             | 10                      |
|   | 1                               | 5                         | 141                      | Ecological and environmental education |                         |
| <b>2017</b>   | 1                               | 5                         | 134                      | Entertainment and sports               | 10                      |
|   | 1                               | 5                         | 133                      | Science and technology                 |                         |
| <b>2018</b>   | 1                               | 5                         | 118                      | Science and technology                 | 10                      |
|   | 1                               | 5                         | 144                      | Life experience                        |                         |
| <b>2019</b>   | 1                               | 5                         | 141                      | Science and technology                 | 10                      |
|   | 1                               | 5                         | 154                      | Culture and customs                    |                         |
| <b>Total/<br/>Average</b>                                       | <b>24</b>                       | <b>125</b>                | <b>Average<br/>149.9</b> |  |                         |

As for the reading comprehension check section, it comprises a total of 22 reading passages, 1 chart, and 100 items. In general, the reading comprehension

section contains two to three reading passages along with two to five comprehension check items. Each item is presented in the form of multiple choices. The average word count of each reading passage is 225 words (range: 112 to 338). The topics of the reading passages are mostly related to life experience, science and technology, and culture and customs. The only chart constructed in the test of 2018 is related to a one-week weather forecast. Table 3.4 presents the detailed information of the reading comprehension items.



**Table 3.4**

*The Detailed Information for the Reading Comprehension Items of the TVEE from 2010 to 2019*

| <b>The Detailed Information for the Reading Comprehension Items of the TVEE</b> |                                 |                           |                          |  |                         |
|---|---------------------------------|---------------------------|--------------------------|--|-------------------------|
| <b>Detail</b><br><b>Year</b>  | <b>Reading Passages Numbers</b> | <b>Test Items Numbers</b> | <b>Word Counts</b>       | <b>Topics</b>                          | <b>Total Test Items</b> |
| <b>2010</b>   | 1                               | 3                         | 167                      | Life experience                        | 10                      |
|   | 1                               | 4                         | 188                      | Culture and customs                    |                         |
|   | 1                               | 3                         | 224                      | Entertainment and sports               |                         |
| <b>2011</b>   | 1                               | 3                         | 112                      | Life experience                        | 10                      |
|   | 1                               | 4                         | 219                      | Life experience                        |                         |
|   | 1                               | 3                         | 118                      | Life experience                        |                         |
| <b>2012</b>   | 1                               | 5                         | 281                      | Literature and art                     | 10                      |
|   | 1                               | 5                         | 191                      | Science and technology                 |                         |
| <b>2013</b>   | 1                               | 5                         | 179                      | Science and technology                 | 10                      |
|   | 1                               | 5                         | 258                      | Ecological and environmental education |                         |
| <b>2014</b>   | 1                               | 5                         | 180                      | Life experience                        | 10                      |
|   | 1                               | 5                         | 244                      | Agriculture and business knowledge     |                         |
| <b>2015</b>   | 1                               | 5                         | 281                      | Culture and customs                    | 10                      |
|   | 1                               | 5                         | 198                      | Agriculture and business knowledge     |                         |
| <b>2016</b>   | 1                               | 5                         | 253                      | Science and technology                 | 10                      |
|   | 1                               | 5                         | 218                      | Life experience                        |                         |
| <b>2017</b>   | 1                               | 5                         | 338                      | Literature and art                     | 10                      |
|   | 1                               | 5                         | 284                      | Culture and customs                    |                         |
| <b>2018</b>   | 1 chart                         | 2                         | 22                       | Life experience                        | 10                      |
|   | 1                               | 4                         | 204                      | Literature and art                     |                         |
|   | 1                               | 4                         | 216                      | Science and technology                 |                         |
| <b>2019</b>   | 1                               | 5                         | 283                      | Ecological and environmental education | 10                      |
|   | 1                               | 5                         | 275                      | Culture and customs                    |                         |
| <b>Total/<br/>Average</b>   | <b>23</b>                       | <b>100</b>                | <b>Average<br/>224.5</b> |  |                         |

## **Analysis Framework**

This section includes two parts. The first part is to explain how the researcher compared 99 VHSCG and 108 VHSCG. The second part consists of two checklists to examine the reading constructs tested in the TVEE. One is the Curriculum Checklist established based on the competence indicators for reading in 99 VHSCG, and the other is the Reading Constructs Checklist modified primarily from Hughes' (2003) Careful Reading Operations. The following presents the explanations and details on how to compare the two curriculum guidelines and how to build the above-mentioned two checklists.

### ***Comparison between 99 VHSCG and 108 VHSCG***

To answer the first research question, that is, differences between 99 VHSCG and 108 VHSCG in terms of reading constructs, the researcher made comparisons of the two curriculum guidelines in three aspects. First, the researcher would discuss overall vocational education goals including fundamental beliefs and core competencies of the two curricula. Second, the researcher would focus on English curriculum objectives and explain the differences between the two curriculum guidelines. Third, English competence indicators in 99 VHSCG and English learning performances in 108VHSCG would be compared in this study.

### ***The Curriculum Checklist and the Reading Constructs Checklist***

To answer the second research question, the researcher designed two checklists to analyze reading constructs measured in the TVEE from 2010 to 2019. First, for the purpose of analyzing the correspondence between 99 VHSCG and the TVEE, the researcher established the Curriculum Checklist of five indicators for reading ability based on the competence indicators stated in 99 VHSCG. The Curriculum Checklist is

composed of two columns. The first column lists the competence indicators of reading; the second column is used to record numbers of matched items. Table 3.5 presents the Curriculum Checklist of 99 VHSCG in the study.

**Table 3.5**

*The Curriculum Checklist of 99 VHSCG*

| <b>The Curriculum Checklist (Competence Indicators)</b>                                      | <b>Numbers of Matched Items</b> |
|--|---------------------------------|
| 1. Recognize the cursive writing of the English alphabet                                     |                                 |
| 2. Understand English notes, signs, and instructions   |                                 |
| 3. Comprehend short stories and understand the main ideas                                    |                                 |
| 4. Comprehend simple letters or messages   |                                 |
| 5. Look up the dictionary or other reference book to read extracurricular books autonomously |                                 |
| <b>Total Number</b>  |                                 |

The analysis result of Table 3.5 can show how the TVEE items match the curriculum guidelines, but it offers little information about actual reading abilities tested in TVEE. The main reason is that the competence indicators for reading proposed in 99 VHSCG are vague and general. For example, there should be many subskills involved in the skill of *Comprehend short stories and understand the main ideas* such as understanding words or sentence patterns presented in the story, identifying discourse markers, and outlining logical organization of the story. But these specific subskills are not mentioned in the competence indicators of 99 VHSCG. Such a limitation of the competence indicators of the VHSCG is acceptable since curriculum guidelines are general principles of conducting teaching in all contexts, rather than specific operation details. And since VHSCG are intended primarily for teaching, it does not serve as a comprehensive model for test item analysis.

To understand what reading constructs are measured by the reading comprehension of the TVEE, it is thus necessary to design a more comprehensive and

detailed reading constructs checklist to analyze the items. From construct-oriented perspective, the skills of reading abilities listed by Hughes (2003) are specific and straightforward. Hence, the researcher modified Hughes' (2003) Careful Reading Operations with reference of the abilities stated in the VHSCG, and the English language proficiency of students in vocational high school. After constructing the checklist, the researcher rearranged the reading construct checklist in sequence of bottom-up skills and top-down skills. The following presents the detailed descriptions of the formation of the Reading Constructs Checklist.

The researcher added two constructs and removed six constructs from Hughes' (2003) Careful Reading Operations. First, the construct of *Locate the specific words or phrases from the text* was added because it is a basic reading skill often presented in the tests for vocational high school. Second, considering the fact that understanding common sentence patterns is essential for students in vocational high school, the researcher added the construct of *Understand common sentence patterns* on the Checklist. In this case, the Reading Constructs Checklist would include both *Understand common sentence patterns* and *Interpret complex sentences* as indicators. To guarantee the consistency of the coding results, the researcher grouped the complex grammatical concepts such as participial construction and participle phrases under the categorization of *Interpret complex sentences*. As for common sentence patterns, the parts of the speech, tenses, phrases and voices are classified in the construct of *Understand common sentence patterns*.

On the other hand, to make the checklist more concise and avoid involving similar abilities, the researcher removed six constructs from Hughes' (2003) Careful Reading Operations. First, *Identify the implicitly stated main ideas* was removed

because the differences between explicitly and implicitly stated main ideas were too subtle for vocational high school students to define. Therefore, the researcher decided to take *Identify the implicitly main ideas* away and changed *Identify the explicitly stated main ideas* into *Identify main ideas*. Second, the researcher deleted *Interpret topic sentence* because it is a subskill involved in the construct of *Identify main ideas*. Third, the researcher removed the two constructs *Distinguish hypothesis from fact* and *Distinguish fact from rumor or hearsay* and only kept *Distinguish fact from opinion* on the Checklist. Fourth, to make the Reading Constructs Checklist more specific, the researcher combines the two constructs with only subtle differences: (1) *Make propositional information inferences, answering questions beginning with who, when, what, and* (2) *Make propositional explanatory inferences concerned with motivation, cause, consequence and enablement, answering questions beginning with why, how* into *Make propositional information or explanatory inferences*. Thus, the items related to inference, including word inference, would be categorized into this construct. Finally, the construct *Make pragmatic inferences* was removed from the Checklist because it overlaps to certain degree with Constructs 7, 8, and 9 that involve pragmatic inference on intention attitudes and intended audience.

As for how to classify each construct into the skills of bottom-up and top-down, the researcher made decisions based on the discussed definitions in Chapter 2, the Literature Review part. The items testing bottom-up skills focus on recognizing the letters, sounds, words, printed text first and then decoding meaning from the smallest unit like words and phrases to the larger unit like clauses and sentences. In other words, the items testing words or phrases at sentence level would be regarded as testing bottom-up skills. Therefore, the researcher categorized six constructs into the



bottom-up skills: (1) *Locate the specific words or phrases from the text*, (2) *Understand common sentence patterns*, (3) *Interpret complex sentences*, (4) *Identify pronominal reference*, (5) *Infer the meaning of an unknown word or phrase from context*, and (6) *Make propositional information or explanatory inferences*. On the other hand, the items testing top-down skills involve testing connections between sentences, global main ideas, and context information. The researcher put the rest of the ten constructs into the top-down skills: (1) *Identify discourse markers*, (2) *Identify main ideas*, (3) *Outline logical organization of a text*, (4) *Outline the development of an argument*, (5) *Distinguish general statements from example*, (6) *Distinguish fact from opinion*, (7) *Recognize writer's intention*, (8) *Recognize the attitudes and emotions of the writer*, (9) *Identify address or audience for a text*, and (10) *Identify what kind of text is involved (e.g. editorial, diary, etc.)*. Among the ten constructs, Number 1 to Number 6 are relevant to text-internal knowledge and Number 7 to Number 10 are much related to context interpretation.

The Reading Constructs Checklist is composed of three columns. The first column is the section of bottom-up and top-down categories. The second column lists the reading constructs and the third column is to record numbers of matched items. The details of the Reading Constructs Checklist are provided in Table 3.6.

**Table 3.6***The Reading Constructs Checklist in the study*

| <b>The Reading Constructs Checklist</b> |  | <b>Numbers of Matched Items</b> |
|---|--|---------------------------------|
| I. Bottom-up skills<br>(Local)          | 1. Locate the specific words or phrases from the text                    |                                 |
|   | 2. Understand common sentence patterns                                   |                                 |
|   | 3. Interpret complex sentences   |                                 |
|   | 4. Identify pronominal reference   |                                 |
|   | 5. Infer the meaning of an unknown word or phrase from context           |                                 |
|   | 6. Make propositional information or explanatory inferences              |                                 |
| II. Top-down skills<br>(Global)         | 1. Identify discourse markers  |                                 |
|   | 2. Identify stated main ideas  |                                 |
|   | 3. Outline logical organization of a text                                |                                 |
|   | 4. Outline the development of an argument                                |                                 |
|   | 5. Distinguish general statements from example                           |                                 |
|   | 6. Distinguish fact from opinion   |                                 |
|   | 7. Recognize writer's intention  |                                 |
|   | 8. Recognize the attitudes and emotions of the writer                    |                                 |
|   | 9. Identify address or audience for a text                               |                                 |
|   | 10. Identify what kind of text is involved (e.g. editorial, diary, etc.) |                                 |
| <b>Total Number</b>                     |  |                                 |

To answer the research question, the test items of the TVEE from 2010 to 2019 will be coded on the two checklists; one is the Curriculum Checklist and the other is the Reading Constructs Checklist. The results will show to what degree the test items match the indicators listed in the Curriculum Checklist. Also, the coding results of the Reading Constructs Checklist will show what reading constructs are tested in the TVEE. The results of the two checklists put together may offer basis for anticipating future development of the TVEE with the release of 108 VHSCG.

### **Data Coding Procedure**

This section explains the coding method and procedure. The two checklists were

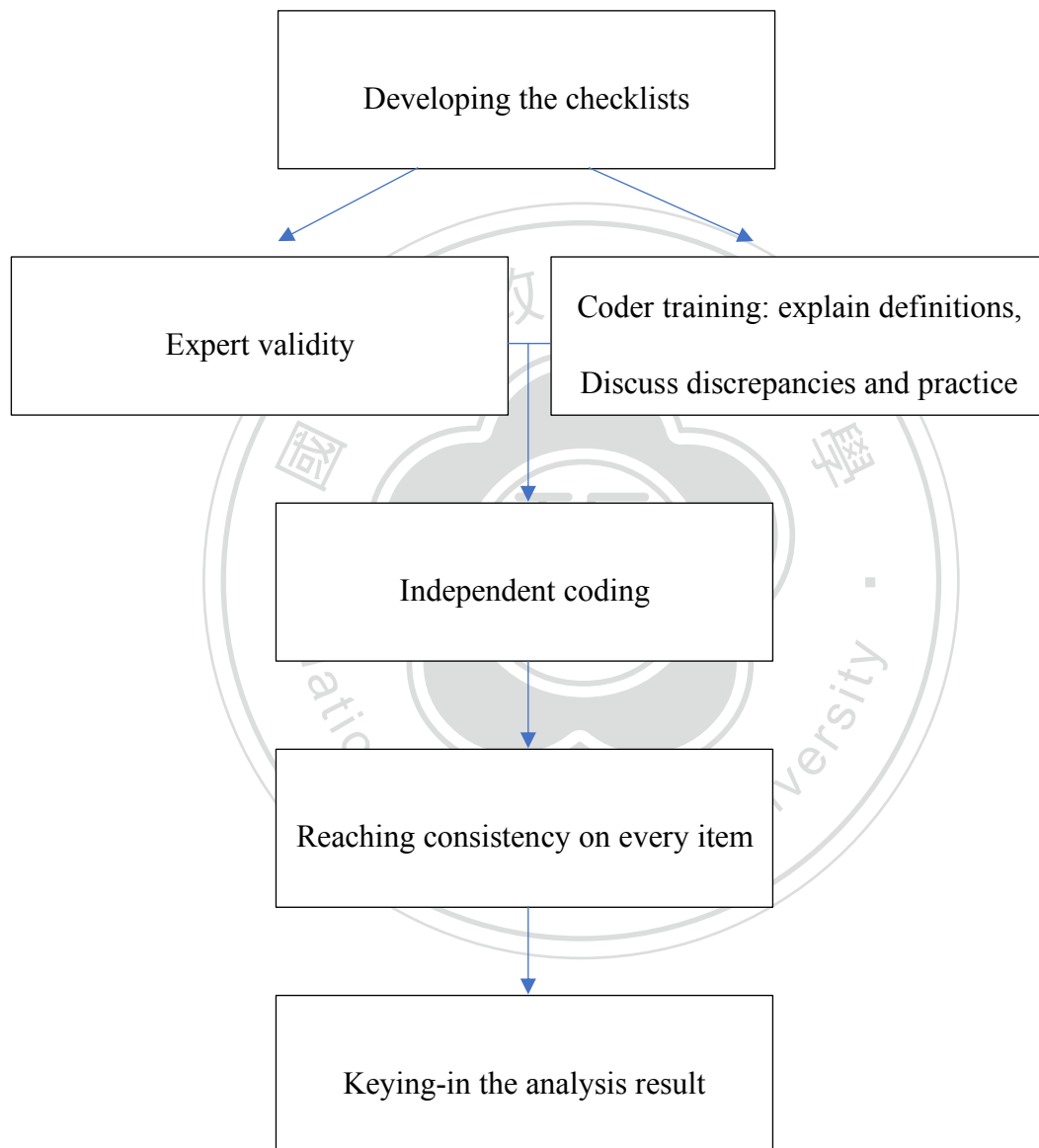
reviewed by a professor who specializes in the theory of testing and teaching to ensure the validity of the checklists. Then, to ensure the reliability of coding results, besides the researcher, one experienced English teacher who has sufficient knowledge in teaching and testing was invited to take part in the coding process. The researcher employed Cohen's Kappa coefficient to examine the inter-rater agreement and consistency. For qualitative analysis, the final agreement between the two raters is required. To reach consensus, the two raters had at least three meetings to discuss, practice and accomplish the coding.

In the first meeting, the raters clarified the definitions and did first coding practice. Before meeting, the researcher printed out the test items and the two checklists. In the meeting, the researcher first explained the purpose of the present study. Second, the researcher explained the meaning of each specification to make sure both raters could completely understand the meaning of each definition. Third, the reading comprehension test items in 2010 of the TVEE were provided as the samples for the raters to practice coding independently. When the raters had different opinions about the coding, the researcher should review the definitions again and hold a discussion. After the coder training, the raters started to analyze the test items from 2011 to 2015 of the TVEE and brought the coding results to the second meeting.

In the second meeting, after the raters finished the independent coding, the raters compared the coding results and discussed discrepancies. If a test item involves more than one constructs, it will be coded twice on the checklist. After the second meeting, the raters analyzed the test items from 2016 to 2019 of the TVEE and brought the coding results to the third meeting.

In the third meeting, the raters repeated the same procedure of comparing the

coding results and discussing discrepancies. The categorization of each test items from 2010 to 2019 of the TVEE would be determined. At the end of the third meeting, the researcher compared the independent coding results to calculate the inter-rater reliability. The data coding procedure is illustrated in Figure 3.1.



**Figure 3.1**

*The Steps of the Coding Procedure of the Present Study*

## Inter-rater Reliability

Inter-rater reliability, also called inter-rater agreement, provides a way to quantify the degree of agreement between two or more coders coding the data independently (Armstrong, Gosling, Weinman & Marteau, 1997; Hallgren, 2012). The present study adopted Cohen's Kappa coefficient to measure the extent of agreement and consistency between the two coders to avoid the observed agreement happening by chance.

The magnitude of Cohen Kappa coefficient of the Curriculum Checklist is 0.82, and the magnitude of Cohen Kappa coefficient of the Reading Constructs Checklist the present study is 0.74. According to Viera and Garrett (2005), the Kappa statistic varies from 0 to 1; namely, a Kappa of 1 suggests perfect agreement between the coders, whereas a Kappa of 0 indicates less than chance agreement. Generally speaking, the Kappa value of 0.61 to 0.80 is substantial agreement. The coefficient of the present study shows the coding consistency and assures inter-rater reliability

## Exemplification of Data Coding Procedure

To explain the decision made in the coding procedure, this section exemplifies how the raters analyze the items and do the coding. The researcher presents three examples respectively from cloze section and reading comprehension section and explains how the test items are classified.

(1)

Many people celebrate their birthday with a cake and candles. But have you ever wondered how the birthday celebration started? According to some historians, putting candles on the cake   27   in Ancient Greece. The Greeks would make moon-shaped cakes to honor Artemis, the goddess of the moon....

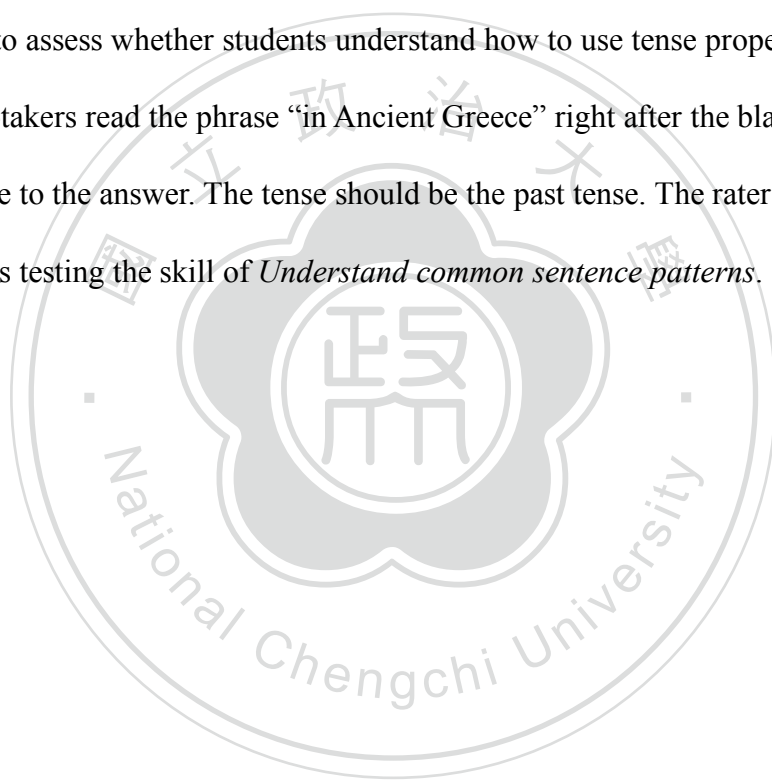
27. (A) begin                      (B) began\*                      (C) begun                      (D) beginning

(TVEE, 2019)

Explanation:

To answer the question, the raters needed to read the passage first and comprehended the short story. Then the raters decided the grammatical point tested is verb tense. In terms of the correspondent competence indicators in 99 VHSCG, this item is grouped under the indicator of *Comprehend short stories and understand the main idea*.

As for the reading constructs tested in this item, the raters found that the purpose of this item was to assess whether students understand how to use tense properly in the context. Test-takers read the phrase “in Ancient Greece” right after the blank, which gave a clue to the answer. The tense should be the past tense. The raters thus coded this item as testing the skill of *Understand common sentence patterns*.



(2)

One summer afternoon when I went to visit grandmother, she was busy with her pottery. She was sitting on the floor on her green shawl, with her property all around her. In her hand was a small bowl, which she was polishing.

I sat beside grandmother to watch her smooth and polish the pottery. To smooth out the rough edges, she used a pad used for cleaning pots. Then dampening the pottery, she rubbed it with a small, smooth stone until it shone.

Her hands at times would move swiftly and then slow down. While working, she sometimes hummed a song to herself. As I was sitting beside grandmother, she didn't even glance at me for a long time because she was concerning on her pottery.

After completing the pottery, she glanced up at me over her eyeglasses and asked, "When did you come?" I said, "I came a long time ago." Then we both laughed and sat there on the floor chatting for a few minutes.

43. Why did the author and the grandmother laugh?

- (A) The grandmother made beautiful pottery.
- (B) They both loved singing a song to themselves.
- (C) The author brought the grandmother some pottery.
- (D) The grandmother didn't notice the author was there. \*

(TVEE, 2010)

Explanation:

In terms of the correspondent competence indicators in 99 VHSCG, the raters found that there was no inferencing skill stated in 99 VHSCG. Hence, based on the reading text type, the researcher classified this item into the indicator of *Comprehend short stories and understand the main ideas*.

With regard to the reading constructs tested in this item, the raters categorized this item into the skill of *Make propositional information or explanatory inferences*.

Test-takers first needed to identify the relevant part from the following text:

... "After completing the pottery, she glanced up at me over her eyeglasses and asked, "When did you come?" I said, "I came a long time ago." Then we both laughed and sat there on the floor chatting for a few minutes."

Then, they needed to infer the cause relationship between "When did you come?" and "I came a long time ago" to know the reason they laughed was that the grandmother didn't notice the author had been there for a while.

(3)

Everywhere we look there is color, from the blue sky to the green grass, from the gray concrete of a city to the black of a moonless night. Colors have a direct and powerful impact on the way we feel and react to our surroundings. When we decorate our homes, we choose colors that welcome us and make us feel good. Some colors excite us while others soothe and calm us. For example, when the Blackfriar Bridge in London was painted green, suicide jumps from the bridge decreased by 34 %. Research reveals that people have similar emotional responses to specific colors and in general, the brighter the color, the stronger the response.

42. According to the passage, what color has a soothing effect on people?  
(A) Red                      (B) Blue                      (C) Green\*                      (D) Gray

(TVEE, 2011)

Explanation:

For the correspondent competence indicators in 99 VHSCG, the raters categorized this item into *Comprehend short stories and understand the main ideas*.

As for the reading constructs of Table 3.6, this item tests abilities of both *Locate the specific words or phrases from the text* and *Make propositional information or explanatory inferences*. Firstly, to answer this question, test-takers needed to identify the requested information from the following text:

...Some colors excite us while others soothe and calm us. For example, when the Blackfriar Bridge in London was painted green, suicide jumps from the bridge decreased by 34%...

The raters thus categorized this item into the skill of *Locate the specific words or phrases from the text*. Then, test-takers needed to find the keyword “soothe” and saw the phrase “For example, when the Blackfriar Bridge in London was painted green, suicide jumps from the bridge decreased by 34%...”, which was to provide description of the green color as an example to explain the general statement stated in the foregoing sentence. Therefore, this item also tested the skill of *Make propositional information or explanatory inferences*.



## CHAPTER 4

### RESULTS AND DISCUSSION

This chapter consists of four sections. In this chapter, the results of the analysis are presented and discussed in response to the three research questions. The first section presents the differences between 99 VHSCG and 108 VHSCG in terms of reading constructs. The second section presents the results of the Curriculum Checklist, which shows the correspondence between the TVEE and the competence indicators stated in 99 VHSCG. The third section presents the results of the distribution of the Reading Constructs Checklist of the TVEE. The fourth section discusses what changes the differences between 99 VHSCG and 108 VHSCG can bring about in future TVEE.

#### **Differences between 99 VHSCG and 108 VHSCG in Reading**

The results of the comparison between 99 VHSCG and 108 VHSCG is divided into three parts. The first part discusses the overall vocational school educational goals, including the fundamental beliefs and core competencies. The second part discusses English curriculum goals in the two curriculum guidelines. Finally, the third part discusses the similarities and differences between English competence indicators stated in 99 VHSCG and learning performances stated in 108 VHSCG.

#### ***Overall Vocational School Educational Goals***

There is a slight difference in overall vocational school educational goals

between 99 VHSCG and 108 VHSCG because the two curriculum guidelines hold different views on fundamental beliefs and core competencies. The fundamental belief of 99 VHSCG is to train students to develop basic abilities and become modern citizens, making “knowledge acquisition” to “take-away abilities”. In this way, 99 VHSCG emphasizes training students’ “process skills”, “thinking ability”, and “inquiry intelligence”. Based on these beliefs, 99 VHSCG lists four vocational school educational goals to state what skills students need in life and how to become modern citizens. Table 4.1 is the description of the overall vocational school educational goals in 99 VHSCG.

**Table 4.1**

*The Overall Vocational School Educational Goals in 99 VHSCG*

| <b>The Overall Vocational School Educational Goals in 99 VHSCG</b>   |
|--|
| (1) Enhance professional knowledge and cultivate the basic ability to work.  |
| (2) Cultivate professional ethics and attitude and prepare responsible and hard-working attitude.  |
| (3) Develop humanistic and technological literacy, enrich the life, and improve creative thinking and adaptable ability to social changes. |
| (4) Develop the interest in further education to lay the foundation for career development.  |

According to Table 4.1, to become ideal modern citizens, 99 VHSCG values students’ professional knowledge and work attitude. Besides, cultivating humanistic and technological literacy and developing life-long learning attitudes are stressed in the 99 VHSCG educational goals.

108 VHSCG, alternatively, emphasizes holistic education. Further to help students become ideal modern citizens, 108 VHSCG accentuates “core competencies”, which enables students to make use of what they have learned in class to develop problem-solving skills in real-life scenarios and face future challenges. What’s more, students are taught to reflect on their own learning process. Classrooms

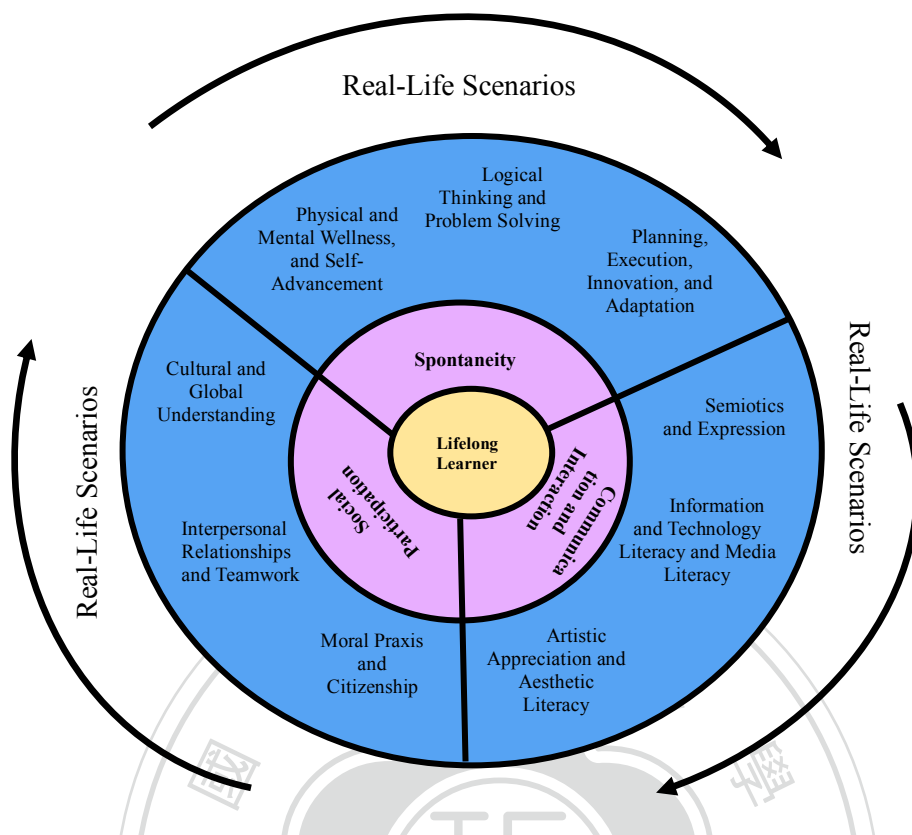
are student-focused and individual needs are valued. Based on these concepts, 108 VHSCG lists four vocational school educational goals to help students cultivate whole-person development and lifelong learning. Table 4.2 is the description of the overall vocational school educational goals in 108 VHSCG.

**Table 4.2**

*The Overall Vocational School Educational Goals in 108 VHSCG*

| <b>The Overall Vocational School Educational Goals in 108 VHSCG</b>  |
|--|
| (1) Cultivate core competencies and become modern citizens.<br>(2) Strengthen basic knowledge and develop lifelong learning.<br>(3) Develop professional skills and promote career development.<br>(4) Emphasize moral character and enhance personal value. |

The four educational goals listed in 108 VHSCG emphasize the spirit of “core competencies”. The idea of “core competencies” emphasizes that learning should not be limited to subject knowledge and skills, but rather focus on combination of learning and life and encourage learners to develop their characters with the whole-person approach in mind. According to MOE (2014), 108 VHSCG presents three core dimensions (each dimension involves three items) “spontaneity, communication and interaction, and social participation” as the core spirits. The nine core competencies are: (1) “physical and mental wellness and self-advancement, (2) logical thinking and problem solving, (3) planning, execution, innovation and adaptation, (4) semiotics and expression, (5) information and technology literacy and media literacy, (6) artistic appreciation and aesthetic literacy, (7) moral praxis and citizenship, (8) interpersonal relationships and teamwork, and (9) cultural and global understanding”. Figure 4.1 is the core competencies in 108 VHSCG.



**Figure 4.1**

*The Core Competencies in 108 VHSCG (MOE, 2014)*

### **English Curriculum Goals**

The general ideas of English curriculum goals stated in the two curriculum guidelines are similar. Both curricula value the four basic skills of listening, speaking, reading and writing as the essential skills for daily communication. Besides, developing effective English learning strategies and laying the foundation for lifelong learning are also emphasized. But strictly speaking, the goals listed in 99 VHSCG focus on the “ability-orientation learning model”, which means students need to acquire certain abilities to attain learning goals. In English curriculum goals, 99 VHSCG proposes four indicators: (1) Use learned words and grammar in daily communication through listening, speaking, reading and writing; (2) Develop

effective English learning strategies; (3) Recognize and understand the differences between Chinese and Western cultures; and (4) Develop the ability to think independently. The four curriculum goals indicate the basic skills that students should acquire in English class but it seems that the four goals are not enough for students to be competitive internationally. Take cultural awareness for example. 99 VHSCG only mentions Chinese and Western cultures, which does not conform to the trend of globalization and multiculturalism. In this way, the English curriculum goals are limited to cultivating individual learning skills instead of connecting what they learned to the world.

Unlike 99 VHSCG, 108 VHSCG upgrades the “ability-orientation learning model” into “core competency-oriented learning model”. Students with core competencies can apply knowledge, skills and attitudes they learned to different subjects and fields. Importantly, students can use different learning methods and strategies to solve problems and undergo self-reflection. Based on these concepts, English learning is no not only learning English knowledge but using English to acquire new knowledge for work and life. Hence, 108 VHSCG lists five English curriculum goals: (1) Improve English listening, speaking, reading and writing skills to enhance the ability of communication, interaction, and acquisition of new knowledge for life and workplace; (2) Promote effective English learning strategies to strengthen self-learning ability and lay the foundation for lifelong learning; (3) Enhance self-confidence and interest in learning and develop positive attitudes for learning; (4) Cultivate diverse and international perspectives to understand and respect different cultures; and (5) Develop the ability of logical thinking and innovation.

### ***Competence Indicators and Learning Performances***

There are several differences between the competence indicators listed in 99 VHSCG and learning performances listed in 108 VHSCG. The core value of the English curriculum proposed in 99 VHSCG is for students to achieve successful communication in life through listening, speaking, reading and writing. Accordingly, 99 VHSCG lists five competence indicators of reading ability. Table 4.3 presents the competence indicators of reading ability listed in 99 VHSCG.

**Table 4.3**

*The Competence Indicators of Reading Ability Listed in 99 VHSCG*

| <b>The Competence Indicators of Reading Ability Listed in 99 VHSCG</b>   |
|--|
| (1) Recognize cursive writing (handwriting) of the English alphabet.<br>(2) Understand English notes, signs and instructions.<br>(3) Comprehend short stories and understand main ideas.<br>(4) Comprehend simple letters or messages.<br>(5) Look up unknown words in the dictionary or reference books to read extracurricular books autonomously. |

99 VHSCG emphasizes the ability to look up the dictionary or other reference books for effective learning strategies and develop life-long learning attitudes, which are necessary skills for vocational high school students. Among the five indicators, Indicator 2 to Indicator 4 are related to whether students can understand different genres such as short stories, simple letters, and instructions. What is missing from 99 VHSCG is specific mention of actual reading skills.

Unlike 99 VHSCG, 108 VHSCG lists eleven learning performances, most of which are related to specific reading skills that students should possess to achieve reading comprehension. Table 4.4 presents the learning performances of reading ability listed in 108 VHSCG.

**Table 4.4**

*The Learning Performances of Reading Ability Listed in 108 VHSCG*

| <b>The Learning Performances of Reading Ability Listed in 108 VHSCG</b>   |
|---|
| (1) Identify the words learned in class.<br>(2) Understand the common English signs.<br>(3) Understand common charts.<br>(4) Understand common daily English expressions.<br>(5) Understand common sentence patterns.<br>(6) Understand the content of short articles and letters.<br>(7) Understand the content and plots of short stories.<br>(8) Identify the elements of a story, for example, background, characters, events, and ending.<br>(9) Infer the meaning of words or sentences by using word structures, context, sentence structures, and discourse structures.<br>(10) Guess the meaning of the words and infer the meaning from pictures or graphs.<br>(11) Understand common charts and manuals used in the workplace. |

The learning performances listed in 108 VHSCG cover those included in 99 VHSCG but expand to cover actual reading skills instead of genres. For example, 99 VHSCG does not illustrate what skills students need to acquire to comprehend short stories and understand a main idea. 108 VHSCG explains the skills or subskills students should possess to achieve reading more precisely by listing two learning performances: (1) *Infer the meaning of words or sentences by using word structures, context, sentence structures, and discourse structures*, and (2) *Guess the meaning of the words and inferring the meaning from pictures or graphs*. Both abilities involve more context clues, which suggests that to achieve reading comprehension, it is important to develop students' reading skills like integrating the textual relationships across sentential level. Improving reading ability is no longer limited to understanding words, phrases, sentence patterns or main ideas, but to also include how to decipher connections between sentences or even across sentences in discourse. Students with inferring and guessing abilities can define unknown words and develop effective reading strategies. Last but not least, 108 VHSCG emphasizes the importance of

understanding the charts and manuals used in the workplace for future career development, which is a practical ability for vocational high school students.

### Test Items Analysis with Reference to Curriculum Checklist

This section describes the correspondence between the TVEE and 99 VHSCG.

Table 4.5 shows the results of the correspondence between the competence indicators stated in 99 VHSCG and the reading test of the TVEE from 2010 to 2019.

**Table 4.5**

*The Results of Curriculum Checklist*

| The Curriculum Checklist (Competence Indicators)  | Numbers of Matched Items |
|---|--------------------------|
| 1. Recognize the cursive writing (handwriting) of the English alphabet.                                   | 0 (0%)                   |
| 2. Understand English notes, signs and instructions.  | 5 (2.22%)                |
| 3. Comprehend short stories and understand the main ideas.  | <b>220 (97.78%)</b>      |
| 4. Comprehend simple letters or messages.   | 0 (0%)                   |
| 5. Look up unknown words in the dictionary or reference books to read extracurricular books autonomously. | 0 (0%)                   |
| <b>Total Number</b>   | 225 (100%)               |

From this table we can see the test items primarily focused on the indicator of *Comprehend short stories and understand the main ideas* (97.78%). Among the 225 items, 220 test items aim to examine whether test-takers are capable of understanding short stories and grasping the main ideas, and only 5 out of 225 test items was categorized into the indicator of *Understand English notes, signs and instructions* (2.22%). This shows that there is a definitive lack of emphasis or evaluation on text types over the last ten years of the TVEE. In 47 reading passages, there is only one chart presented in the test and the rest of the items are short articles. Thus, limited by the text types, most of the reading texts are classified into the category of short stories.



Among the three competence indicators absent from the test, two of them cannot be measured by the TVEE. The first indicator is *Look up unknown words in the dictionary or reference books to read extracurricular books autonomously*. This competence indicator aims to cultivate students with effective English learning strategies, develop correct learning attitudes toward English learning and train independent thinking. Through the training in the classroom, students are able to develop lifelong learning. This ability, however, is difficult to be tested by examination. And the other competence indicator is *Recognize the cursive writing (handwriting) of the English alphabet*. For beginners, besides learning printing (block-letter style), students have to recognize cursive writing (handwriting) as well. This competence indicator aims to help students to read any books written in cursive writing (handwriting) fluently. There is, however, no item in the TVEE that would assess these competencies.

In addition, the indicator *Comprehend simple letters or messages* is also absent from the test. Based on the analysis of ten years of TVEE, the texts of reading are basically short passages and articles. Other genre types such as notes, signs, instructions, simple letters and messages are also not found. It is quite obvious that the TVEE has not adopted an evaluation for all reading types.

Example 4 includes two typical items testing *Comprehend short stories and understand the main ideas* in cloze section.

(4)

...In October 2012, Malala was 27 in the head by a Taliban gunman, which raised her international fame. She was named as one of *TIME*'s most influential people in 2013, and her autobiography *I Am Malala* was 28 in the same year. Then in 2014 she became the youngest person ever to win the Nobel Peace Prize. Amid the global support, Malala was flown to the United Kingdom for advanced medical treatment of the gunshot. After recovery, she began...

27. (A) survived      (B) scanned      (C) scattered      (D) shot\*  
28. (A) released\*      (B) rebelled      (C) reduced      (D) relaxed

(TVEE, 2015)

In terms of the correspondent competence indicators in 99 VHSCG, based on the reading text type, the researcher classified this item into the closet indicator of *Comprehend short stories and understand the main ideas*. Students should comprehend the short story of Malala and understand the main idea to get the full picture of the story.

Example 5 is a typical item testing *Comprehend short stories and understand the main ideas* in reading comprehension section.

(5)

*Hannah Montana* is a movie about an ordinary teenager with a special secret, one that she is trying her best to hide from others. Apart from a few people, no one knows that the normal-looking Miley is actually the famous teen singer Hannah Montana. This double life can cause Miley to make mistakes; however, she is brave, smart, and also good-hearted.

Sometimes, Miley has to make courageous choices. For example, when she is late for her best friend's birthday party and does not have time to change into an ordinary-looking teenager, she goes to the party as Hannah Montana. Unfortunately, the party turns into a big failure; everyone is more excited about seeing a great celebrity and forgets about making her friend happy. Nonetheless, we can still admire Miley for putting herself at risk for her friend.

Another reason for liking Miley is that she is smart. Her father takes her to live in her hometown of Crowley Corners, a very rural and simple town. One morning, Miley has to get some fresh eggs for breakfast, but she encounters a problem—the hens do not want to give her their eggs. Miley thinks up a clever idea. She sings and dances to distract the hens. It works, but in her excitement, she breaks almost all the eggs she has collected. Once again, she fails, but there is no doubt about how creative she is.

Perhaps the most important reason to like Miley is that she has a very good heart. She wants to help her friends and family, and in the process of doing this she would feel sorry when something goes wrong. Particularly, she does not want to lie to Travis, a boy who likes her very much. He does not know she is a great singer, so she feels upset in her heart about not letting him know.

There is a lot to see in *Hannah Montana*, but viewers will definitely enjoy the main character in the movie. She is very humorous, courageous, and kind.

35. Based on the passage, what kind of movie is *Hannah Montana*?

(A) Teen sports-action.

(B) Teen techno-thriller.

(C) Teen science-fiction.

(D) Teen comedy-drama.\*

(TVEE, 2017)






The item aims to test whether students can understand who Hannah Montana is and grasp the main idea of the passage. In the passage, several interesting details happened to Miley and her family and friends. From the last sentence in the first paragraph, “she is brave, smart, and also good-hearted”, the first sentence in the second paragraph “Miley has to make courageous choices”, and the last sentence in the last paragraph “She is very humorous, courageous, and kind”, students can infer that these sentences are related to the main idea of comic topic. So the best answer is

Option D.

Example 6 is the only chart testing *Understand English notes, signs, and instructions* in reading comprehension section.

(6)

The following is the weather forecast for the next five days in Hualien. Answer the questions based on the given information.

| Day            | Mon.  | Tue.  | Wed.   | Thu.  | Fri.  |
|----------------|---|---|--|---|---|
| Weather        |  |  |  |  |  |
| Chance of Rain | 10%   | 0%  | 30%  | 80%   | 40%   |

32. On which day is it most likely to rain?  
(A) Monday (B) Tuesday (C) Thursday\* (D) Friday

33. Jane is planning a two-day trip to Hualien. She likes sunny days, so which period would be the best choice for the trip?  
(A) Monday to Tuesday\* (B) Tuesday to Wednesday  
(C) Wednesday to Thursday (D) Thursday to Friday

(TVEE, 2018)

The items aim to test whether students can understand the English weather forecast.

As this item uses pictures as sources of information, the most appropriate correspondent competence indicator is *Understand English notes, signs and instructions*.

These results highlight an uneven distribution of reading items in the TVEE.

Since 99 VHSCG is not designed for testing and has little to do with actual reading skills, about 98 % of the items is coded as the indicator of *Comprehend short stories and understand the main ideas*.

## Test Items Analysis with Reference to Reading Constructs Checklist

The results of the Reading Constructs Checklist are discussed in this section to answer the question about what reading constructs are measured by the reading comprehension of the TVEE. Table 4.6 shows the distribution and the percentage of the numbers of the matched items for the cloze section from 2010 to 2019 of the TVEE.

**Table 4.6**

*The Distribution and the Percentage of the Constructs Tested by Cloze*

| The Reading Constructs Checklist |  | Numbers of Matched Items |
|----------------------------------|--|--------------------------|
| I. Bottom-up skills (Local)      | 1. Locate the specific words or phrases from the text                    | 0 (0%)                   |
|                                  | 2. Understand common sentence patterns                                   | <b>51 (40.8%)</b>        |
|                                  | 3. Interpret complex sentences   | 4 (3.2%)                 |
|                                  | 4. Identify pronominal reference   | 1 (0.8%)                 |
|                                  | 5. Infer the meaning of an unknown word or phrase from context           | 0 (0%)                   |
|                                  | 6. Make propositional information or explanatory inferences              | <b>60 (48%)</b>          |
| II. Top-down skills (Global)     | 1. Identify discourse markers  | <b>9 (7.2%)</b>          |
|                                  | 2. Identify main ideas   | 0 (0%)                   |
|                                  | 3. Outline logical organization of a text                                | 0 (0%)                   |
|                                  | 4. Outline the development of an argument                                | 0 (0%)                   |
|                                  | 5. Distinguish general statements from example                           | 0 (0%)                   |
|                                  | 6. Distinguish fact from opinion   | 0 (0%)                   |
|                                  | 7. Recognize writer's intention  | 0 (0%)                   |
|                                  | 8. Recognize the attitudes and emotions of the writer                    | 0 (0%)                   |
|                                  | 9. Identify address or audience for a text                               | 0 (0%)                   |
|                                  | 10. Identify what kind of text is involved (e.g. editorial, diary, etc.) | 0 (0%)                   |
| <b>Total Number</b>              |  | <b>125 (100%)</b>        |

Table 4.6 shows that the items from cloze section are not distributed equally. In general, most items, that is 60 items (48%), belong to *Make propositional information*

or *explanatory inferences*; the second frequently-tested construct is *Understand common sentence patterns* with 51 items (40.8%). The third frequent tested construct is *Identify discourse markers* with only 9 items (7.2%).

Apart from the abovementioned three constructs, the rest of the constructs are almost absent from the cloze tests of the TVEE from 2010 to 2019. Most of the constructs not measured in the test involve more top-down skills like contextual interpretation rather than the knowledge of vocabulary, grammar and sentence patterns. For example, the item testing *Identify main ideas* may concern the subskills of integrating the contextual clues across sentential level or identifying a logical context, which has a lot to do with overall reading comprehension skills. In addition, these complex constructs are not particularly stated in 99 VHSCG. This may suggest that at the stage of vocational high school, the cloze tests are mainly intended to measure whether students can understand common sentence patterns, infer the meanings of target words or phrases from the context and identify discourse markers, which coincides with the notion proposed by some scholars like Bachman (1982), who indicated that the main purposes of the cloze tests are to measure syntactic knowledge and discourse structure in a text. The following present the examples of the frequently-tested constructs in cloze section:

First of all, *Understand common sentence patterns* is the most frequently-tested construct. The items categorized in this construct are basic and common sentence patterns or tenses and phrases. Example 7 is a typical example.

(7)

Have you ever imagined that you can chat with a robot instead of a real person? The techniques of Artificial Intelligence (AI) 22 become mature. Many companies, such as Google, Amazon, and Apple, have created smart voice assistants that can understand what you say, search for answers to your questions, and complete some tasks 23 on your instructions. More recently, chatbots, which are computer programs with AI techniques on apps, have been developed in order to present useful information whenever users request 24. From the perspectives of business, replacing humans 25 chatbots can save money. As a result, many companies nowadays want to develop their own chatbots.

22. (A) has                      (B) has been                      (C) have\*                      (D) have been  
25. (A) besides                      (B) during                      (C) towards                      (D) with\*  
(TVEE, 2019)

The purpose of Item 22 is to examine whether students are able to notice the function of tense forms. According to the passage, since Artificial Intelligence (AI) has been in existence for some time, it is best to use the present perfect tense. Moreover, the subject (techniques) is a plural noun, so the answer should be Option C. As for Item 25, “replace A with B” is a phrase familiar to students, so they could choose the correct answer with the preposition “with” from the verb “replace”.

*Make propositional information or explanatory inference* is the second most commonly tested construct. This construct requires students to infer the possible information or explanation of the proposition from the clues given by context. The clues are often hidden in the previous or following propositions to help students infer the proper explanations. Therefore, items related to choosing correct words or phrases based on context would be categorized into this construct. Example 8 is a typical item.

(8)

Opinions are strongly divided about the type of clothing which is appropriate for worship. According to some religious leaders, people who come to pray should wear clothing that shows respect and 26 for their religion....

26. (A) limitation (B) admiration\* (C) restriction (D) comparison

(TVEE, 2010)

The aim of this item is to examine whether students could infer the meaning from the phrase “show respect” and understand that the function of the conjunction “and” is to connect the two synonymous words. This forces students to make explanatory inferences, identifying the target word as being related to or having a connection to “respect”. In this case, the correct answer should be Option B.

The third frequently-tested construct in the cloze section is *Identify discourse markers*. The function of discourse markers is to manage the flow and the structure of discourse. Students should be able to choose the appropriate “connectors” to bind the ideas from the reading text together, such as Example 9:

(9)

Online dating is very popular today. It enables strangers to introduce themselves to new friends over the Internet, usually with the goal of developing close relationship. Users need to get access to online dating services. 23 some of these services are free, the others are not. Before users can use these online dating services, it is necessary for...

23. (A) Because (B) If (C) Unless (D) While\*

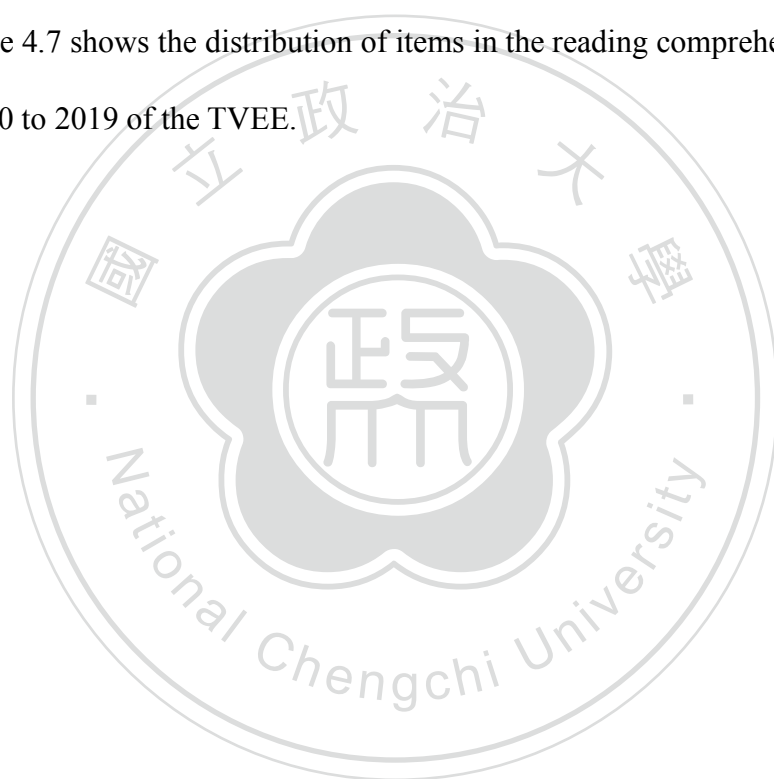
(TVEE, 2018)

To answer this question, students are required to understand the sentence “some of these services are free” and “the others are not” are a contrary point of view; therefore, “while” is the best answer (Option D) to express the contrast meaning for the target sentence.



According to the results of the Reading Constructs Checklist, the constructs measured in the cloze section of the TVEE are mainly related to the skills of understanding common sentence patterns and inferring the possible information or explanations of the target words or phrases from context. As the TVEE is an important test, this imbalance in testing can lead teacher to ignore the less tested constructs when preparing the test. Therefore, test designers and educators should pay more attention to avoid the continuation of this situation.

Table 4.7 shows the distribution of items in the reading comprehension section from 2010 to 2019 of the TVEE.



**Table 4.7***The Distribution and the Percentage of Constructs Tested by Reading Comprehension*

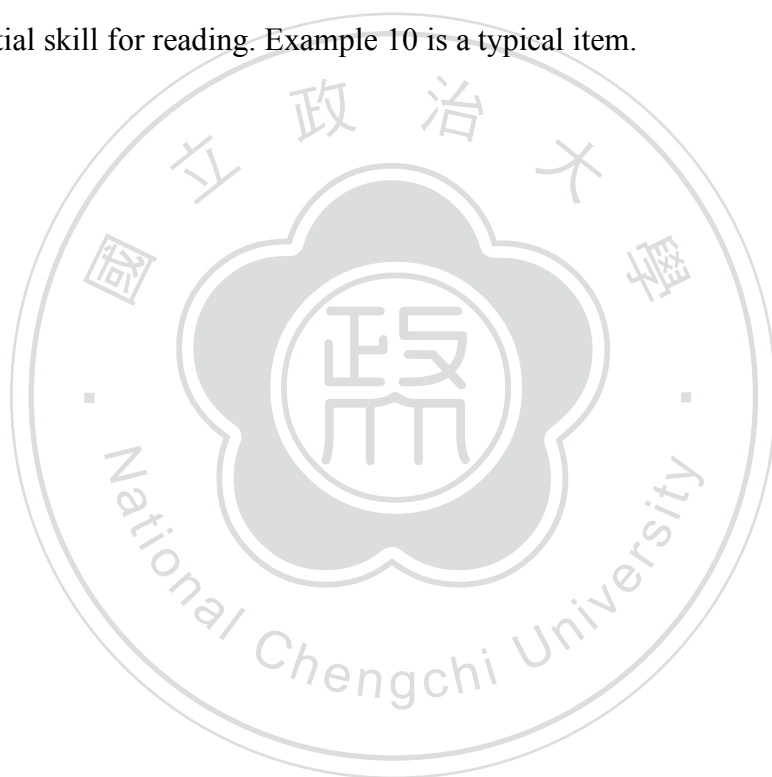
| <b>The Reading Constructs Checklist</b> |  | <b>Numbers of Matched Items</b> |
|---|--|---------------------------------|
| I. Bottom-up skills (Local)             | 1. Locate the specific words or phrases from the text                    | <b>47 (45.6%)</b>               |
|   | 2. Understand common sentence patterns                                   | 0 (0%)                          |
|   | 3. Interpret complex sentences   | 0 (0%)                          |
|   | 4. Identify pronominal reference   | 4 (3.9%)                        |
|   | 5. Infer the meaning of an unknown word or phrase from context           | 2 (1.9%)                        |
|   | 6. Make propositional information or explanatory inferences              | <b>30 (29.1%)</b>               |
| II. Top-down skills (Global)            | 1. Identify discourse markers  | 1 (1%)                          |
|   | 2. Identify main ideas   | <b>18 (17.5%)</b>               |
|   | 3. Outline logical organization of a text                                | 0 (0%)                          |
|   | 4. Outline the development of an argument                                | 0 (0%)                          |
|   | 5. Distinguish general statements from example                           | 0 (0%)                          |
|   | 6. Distinguish fact from opinion   | 0 (0%)                          |
|   | 7. Recognize writer's intention  | 0 (0%)                          |
|   | 8. Recognize the attitudes and emotions of the writer                    | 1 (1%)                          |
|   | 9. Identify address or audience for a text                               | 0 (0%)                          |
|   | 10. Identify what kind of text is involved (e.g. editorial, diary, etc.) | 0 (0%)                          |
| <b>Total Number</b>                     |  | <b>103 (100%)<sup>2</sup></b>   |

As shown in Table 4.7, the items are not equally distributed. It is apparent that the reading comprehension section of the TVEE from 2010 to 2019 only focuses on certain reading skills. Most items belong to *Locate the specific words or phrases from the text* (45.6%). The second most tested construct is *Make propositional information or explanatory inferences* (29.1%). The third most tested construct is *Identify main ideas* (17.5%). Apart from the abovementioned constructs, there are nine constructs not measured in the reading comprehension section of the TVEE. The absent

<sup>2</sup> The reading comprehension comprises a total of 100 items. But there are three items measuring more than one construct, so the total number of the matched items is 103.

constructs are mostly related to the abilities of contextual interpretations, such as outlining argument development, and identifying address or audience for a text. The results show that the test designers emphasize on text-internal skills such as scanning and finding the literal meanings. The following are examples of such frequently tested reading comprehension constructs.

First, *Locate the specific words or phrases from the text* is to ask students to find specific text messages correctly from the articles within time limit, which is a basic but essential skill for reading. Example 10 is a typical item.



(10)

Changdong is in the north of Seoul in South Korea. Only a few hundred thousand people live there, and it has few facilities. It is not as wealthy as many other places in Seoul, but after 2021, it will be one of the most exciting places to visit. The reason for this is Korean popular music, which everybody knows as K-pop – the South Korean government wants Changdong to become the K-pop capital of the world. South Korea knows that K-pop is very important. In 2015,

South Korea made \$ 5 billion from selling K-pop music and related TV shows, films, games, and so on. Furthermore, because of K-pop, other Korean products like Samsung smartphones, Korean-made cars, and Korean-style clothes have become very popular.

K-pop is very global today. For a long time, it has been very popular in China, Japan, Taiwan, and Hong Kong. However, Billboard magazine found a different trend between 2013 and 2016. During this time, the United States was the third biggest buyer of K-pop music. Thus, it can be said that

K-pop has a lot of fans in the West today.

To attract fans from around the world, there are big plans for Changdong. It will have concert halls, music schools, recording studios, art galleries, and a K-pop museum. The place that will be the most important venue, however, is the huge arena. About 20,000 fans will be able to enjoy K-pop events there. Since it is a very big and important project, the arena, which won't be completed until 2021, is already being built. When everything is finished, Changdong will be a very exciting place to visit. For K-pop fans, it will be the coolest place on earth!

37. Where is Changdong?

(A) In the north of Seoul\*

(B) In the east of Seoul

(C) In the south of Seoul

(D) In the west of Seoul

(TVEE, 2017)

The aim of this item is to test whether students are able to locate the specific information of Changdong and then read the relevant part carefully from the passage. Reading for specific information requires students to get a detailed understanding. For this item, students could find out the answer from the beginning of the first sentence and knew that Changdong is in the north of Seoul (Option A).

The second frequently-tested construct is *Make propositional information or explanatory inferences*. It is essential for students to make propositional inferences logically in text comprehension, such as Example 11:

(11)

Energy from the sun is called solar energy. People use solar energy to produce heat in different ways. For example, many buildings use large solar collectors to collect sunlight. Inside the solar collectors are rows of black tubes carrying water or air. Sunlight strikes the tubes and heats the water or air inside them. The tubes carry the heated water or air to pipes that run throughout the building. The heated water or air is pumped through the pipes. If the heat is not needed, it goes to a storage tank. On a cloudy day or at night, the stored heat can be used. This kind of system is called active heating.

Another way to use solar energy is to “trap” it. When sunlight passes through the glass windows and strikes the material inside, the solar energy changes to heat. This heat warms the air inside, so the air inside becomes warmer and warmer. This build-up of heat is called the greenhouse effect. Such kind of heating is called passive solar heating.

In addition to producing heat, solar energy can also be used to produce electricity. Some may think that solar energy seems to be a perfect energy source. It is clean, plentiful, and free. But there are problems in using solar energy. One problem is that not all places receive enough sunlight to make solar energy useful. Besides, solar energy is not constant. If there are several cloudy days in a row, the stored heat or electrical energy may be used up.

34. Which of the following could be inferred from the reading passage?

- (A) There is only one way to use solar energy to produce heat.
- (B) People can enjoy using solar energy without worrying.
- (C) Glass can be used to change sunlight into a source of energy.\*
- (D) All places get enough sunlight to make solar energy.

(TVEE, 2016)

In this question, students are required to draw inference by using pieces of information presented in the article. First, from the sentence “Another way to use solar energy is to...”, students could infer that there was more than one way to use solar energy to produce heat, so Option A was a wrong answer. Second, for Option B, in the final paragraph, the author mentioned the problems of solar energy, therefore, students infer that people may be worried about it instead of enjoying it because of the problems. Third, from the sentence “One problem is that not all places receive enough sunlight to make solar energy useful”, which indicates an opposite idea to that of Option D. As for the Option C (correct answer), students could draw inference from

the second paragraph which mentions how the glass windows change solar energy to heat. Consequently, students have to make inferences based on the detailed information from the context.

The third frequently-tested reading skill in the reading comprehension section is *Identify main ideas*. The main idea of a passage or an article is the message the author wants to convey about the topic. Whether the main idea is expressed directly or implied, it is a critical skill for reading. Example 12 is a typical example tested the construct of *Identify main ideas*.



(12)

In Chinese mythology, snakes are often associated with monsters. Some experts on Taoist customs and beliefs suggest that people put on some decorations with snake designs. Others recommend that people should buy orchids, tulips, and other yellow-colored flowers. These are helpful ways to begin 2013, the Year of the Snake, to attract some good luck.

For some people, snakes have long been scary. One reason may be that unlike most other animals, they have no legs. Another is that some species are deadly poisonous. The other reason may be that they are silent creatures and can often attack without any warning. When people see snakes, they often scream, hoping to frighten them away. In fact, they are just wasting their time. Snakes cannot hear screams because they have no ears. Their eyesight is generally weak, too. However, they have a good sense of smell and can feel even the smallest vibrations made by walking animals. Some snakes can also detect heat so that they can hunt at night for small animals like mice and rabbits. Though they have no arms or legs, they can swallow their prey, alive and whole. Every animal has its strengths and weaknesses, and snakes are no exception.

The best way to protect oneself against the bite of a poisonous snake begins long before seeing one. Before going hiking or picnicking, be sure to wear heavy shoes or boots. Avoid walking through high grass or over fallen trees. Stay on the hiking paths or in open fields. Whatever you do, don't bother to scream.

46. What is the passage mainly about?

- (A) How to treat snakebites.                      (B) A general introduction to snakes.\*  
(C) The eating habits of snakes.                (D) Where to find snakes.

(TVEE, 2013)

The purpose of this item is to test whether students comprehend the central thought the author wanted to express. In the first paragraph, the author mentioned the role of snakes in Chinese was positive and symbolized good luck. In the second paragraph, the author first talked about the negative image of the snakes and later introduced the reasons why snakes were scary to some people. In the final paragraph, the author concluded that there are some useful tips to protect oneself against the bites of the snakes. Therefore, from the above three paragraphs, the whole passage is mainly about the general introduction to snakes, so Option B is the best answer.

According to Table 4.7, there are three items in the reading comprehension testing more than one construct, which is not commonly seen in the reading test of the

TVEE from 2010 to 2019. The three items all involve testing the construct of *Locate the specific words or phrases from the text*. In addition to the example items given on Page 17, the following presents the other two items.

Example 13 is the item testing *Locate the specific words or phrases from the text* and *Identify pronominal reference* in reading comprehension section.

(13)

As E-commerce has become a global economic trend, people are buying more products than ever before through the Internet. According to the statistics of AC Nielsen Corporation, fifty-three percent of Taiwanese have bought something electronically, which makes Taiwan the second largest place worldwide in terms of the number of online shoppers. Store owners are worried that the growing amount of online sales will hurt their businesses. This has led traditional stores to seek new ways to keep their customers loyal.

Experts say that traditional stores can keep their customers by selling goods that buyers may want to see and taste, or feel the material and try on before purchasing. The stores can also offer services to instantly set up or repair electronic products. In addition, stores can offer things that are difficult to ship, or provide goods to buyers more quickly than online stores. Experts say that traditional stores offer the unique social experiences and personal interactions that most people enjoy. A lot of emotions can occur in the final buying decision. Oftentimes, you need that last sense of “Wow, this is exactly what I want!” before you’re ready to pay, and you can’t always get that online.

36. Why do traditional stores seek new ways to keep their customers?

- (A) They don’t know how to shop electronically.
- (B) They want to be part of the E-commerce trend.
- (C) They are worried about the growing amount of online sales.\*
- (D) The market researchers tell them to do so.

(TVEE, 2015)

The item tested two constructs: *Locate the specific words or phrases from the text* and *Identify pronominal reference*. To answer this item, students should first locate the specific phrases “...traditional stores to seek new ways to keep their customers” from the last sentence in the first paragraph. Then, as the question asks the reason why traditional stores seek new ways to keep their customers. To answer it, students have to find out the pronoun “this” refers in the last sentence of the first paragraph. The



clue is in the previous sentence, “Store owners are worried that the growing amount of online sales will hurt their businesses”, so test-takers need to go back to identify the correct answer (Option C).

Example 14 is the other item testing *Locate the specific words or phrases from the text* and *Identify pronominal reference* in reading comprehension section.

(14)

In Chinese mythology, snakes are often associated with monsters. Some experts on Taoist customs and beliefs suggest that people put on some decorations with snake designs. Others recommend that people should buy orchids, tulips, and other yellow-colored flowers. These are helpful ways to begin 2013, the Year of the Snake, to attract some good luck.

For some people, snakes have long been scary. One reason may be that unlike most other animals, they have no legs. Another is that some species are deadly poisonous. The other reason may be that they are silent creatures and can often attack without any warning. When people see snakes, they often scream, hoping to frighten them away. In fact, they are just wasting their time. Snakes cannot hear screams because they have no ears. Their eyesight is generally weak, too.

However, they have a good sense of smell and can feel even the smallest vibrations made by walking animals. Some snakes can also detect heat so that they can hunt at night for small animals like mice and rabbits. Though they have no arms or legs, they can swallow their prey, alive and whole. Every animal has its strengths and weaknesses, and snakes are no exception.

The best way to protect oneself against the bite of a poisonous snake begins long before seeing one. Before going hiking or picnicking, be sure to wear heavy shoes or boots. Avoid walking through high grass or over fallen trees. Stay on the hiking paths or in open fields. Whatever you do, don't bother to scream.

47. According to the passage, which of the following is mentioned as a symbol of good luck?

(A) Keeping snakes as pets.

(B) Shoes or boots.

(C) Decorations with snake designs.\*

(D) Fallen trees.

(TVEE, 2013)

The item tested two constructs: *Locate the specific words or phrases from the text* and *Identify pronominal reference*. To answer the question, according to the stem of the question, students should first locate the specific information in the first paragraph.

“A symbol of good luck” is a clue to find specific information. In the last sentence of the first paragraph “These are helpful ways to begin 2013, the Year of the Snake, to

attract some good luck”, indicates the pronominal reference “These” is the keyword, which shows the previous mentioned ways such as “decoration with snake designs” (Option C) and “buy orchids, tulips, and other yellow-colored flowers” to attract some good luck. Therefore, the best answer is Option C.

Although the items measured more than one constructs are seldom presented in reading comprehension of the past tests, the items involving more than one construct might be tested often in future TVEE. As discussed in Chapter 2, Anderson, Reder, and Simon (1985) believed that to achieve reading comprehension, readers have to rely on multiple subskills to produce meaning. Therefore, an increase in test items involving more than one construct may receive more attention in future TVEE.

The results of the constructs measured in the reading comprehension of the TVEE from 2010 to 2019 are mainly related to the construct of *Locate the specific words or phrases from the text*. In addition, the texts of reading are basically short passages and articles and lack diversity. As the TVEE is an important test, this imbalance in testing can lead teachers and students to ignore the less-tested top-down skills and put emphasis on training bottom-up skills instead.

### **Possible Impacts on Future TVEE with Reference to 108 VHSCG**

This section discusses possible impacts of 108 VHSCG on future TVEE based on the results of the first and second research question of the present study. Under the specification of 108 VHSCG, future TVEE may involve more top-down skills in both cloze section and reading comprehension section and may adopt more diverse texts in the test of reading comprehension.

In future cloze test of TVEE, more top-down skills may be emphasized. In the light of the findings about what reading constructs are measured by cloze test in the

TVEE from 2010 to 2019, top-down skills only account for 7.2%. But according to the literature discussed in Chapter 2, other than measuring syntactic knowledge, Oller (1973) suggested that cloze test should be able to evaluate top-down skills to achieve reading comprehension. Besides, in the learning performances of reading ability, 108 VHSCG specifically listed a skill related to top-down approaches called *Infer the meaning of the words or the sentences by using the word structures, context, sentence structures, and discourse structures* to emphasize that students are required to make inferences to connect ideas both within and across the contexts. Hence, future cloze items of TVEE may involve more top-down skills. The item below from GSAET in 2019 can serve as a good example to support this viewpoint.

April Fool's Day, one of the most light-hearted days of the years, has an unclear origin. Some see it as a celebration related to the turn of the seasons from winter to spring; others, however, believe that it 16 the adoption of a new calendar.

Ancient cultures celebrated New Year's Day on or around April 1, which roughly coincides with the beginning of spring. In 1582, Pope Gregory XIII ordered a new calendar, which called for New Year's Day to be celebrated on January 1....

16. (A) leads to (B) brings out (C) stems from\* (D) come across

(GSAET, 2019)

The purpose of the item is to assess whether test-takers can grasp the main idea as well as understand the idea development from the context. The clue of the answer is in the topic sentence "April Fool's Day... has an unclear origin." Moreover, the second paragraph explains the origin and development of April Fool's Day, so the test-takers can also infer the correct answer by following the idea development from the context. Therefore, besides measuring the meaning of the phrase "stem from", the item is to assess test-takers' top-down skills for reading comprehension.

In addition to cloze section, the items in future reading comprehension section should also involve more top-down skills. Based on the previous discussed literature,

many reading pedagogical researchers (e.g. Goodman, 1970; Nuttall, 1982; Hughes, 2003; Brown, 2010) proposed the importance of top-down skills to explain the fluent reading. But according to the analysis of the distribution of constructs tested by reading comprehension section in the past TVEE, top-down skills only account for 19.5%. Such an imbalanced distribution may be changed because more newly-added top-down skills are found in 108 VHSCG. Take an item from ASET in 2019 for example.

*Tempeh* (or *tempe*), a traditional soy product from Indonesia, is hailed as the country's "gift to the world," like *kimchi* from Korea or *miso* from Japan.

A stable, cheap source of protein in Indonesia for centuries, *tempeh* is a fermented food originating from the island of Java. It was discovered during tofu production when discarded soybean residue caught microbial spores from the air and grew certain whitish fungi around it. When this fermented residue was found to be edible and tasty, people began producing it at home for daily consumption across the country. This has given rise to many variations in its flavor and texture throughout different Indonesian regions.

*Tempeh* is high in protein and low in fat, and contains a host of vitamins. In fact, it is the only reported plant-based source of vitamin B12. Apart from being able to help reduce cholesterol, increase bone density, and promote muscle recovery, *tempeh* has a lot of polyphenols that protect skin cells and slow down the aging process. Best of all, with the same protein quality as meat and the ability to take on many flavors and textures, *tempeh* is a great meat substitute—something the vegetarian and vegan communities have been quick in adopting.

In addition to its highly nutritional makeup, *tempeh* has diverse preparation possibilities. It can be served as a main course (usually in curries) or a side dish to be eaten with rice, as a deep-fried snack, or even blended into smoothies and healthy juices. Though not yet a popular food among international diners, you may find *tempeh*-substituted BLTs (bacon, lettuce, tomato sandwiches) in San Francisco as easily as you can find vegetarian burgers with *tempeh* patties in Bali.

For the people of Indonesia, *tempeh* is not just food but also has cultural value. With the Indonesian traditional fabric *batik* being recognized by UNESCO as "Intangible Cultural Heritage of Humanity," *tempeh* has great potential for this honor as well.

38. What aspects of *tempeh* are discussed in paragraphs 2 to 4?

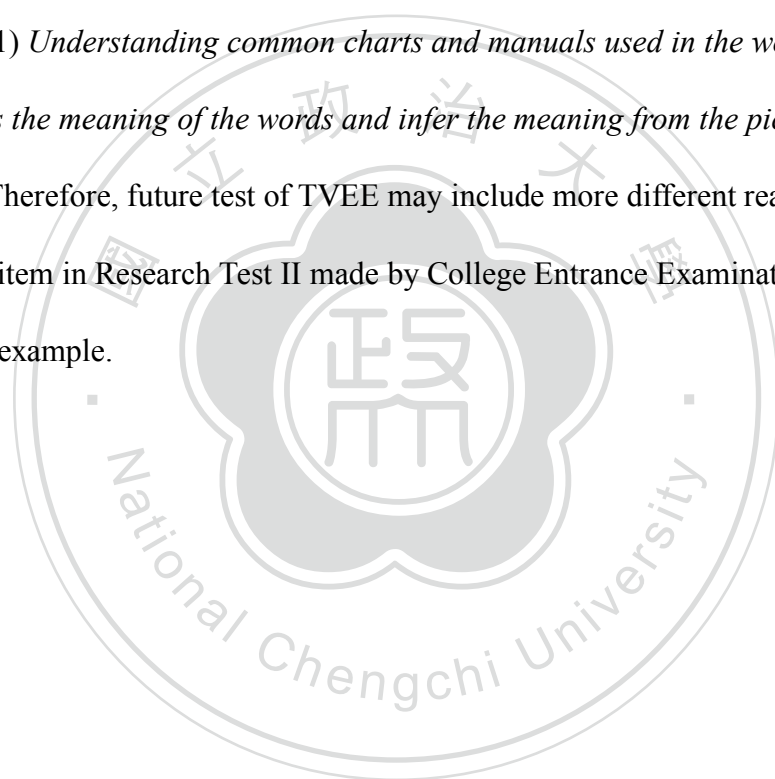
- (A) Origin → nutrition → cuisine.\* (B) Origin → cuisine → marketing.  
(C) Cuisine → nutrition → marketing. (D) Distribution → cuisine → nutrition.

(ASET, 2019)

The purpose of the item is to assess whether test-takers can identify the organization of a text. The clue of the answer lies in the main ideas of the second, the third, and the fourth paragraphs. Hence, test-takers should make use of top-down skills to choose

the correct answer.

Besides involving more top-down skills in reading comprehension section, future TVEE may include diverse texts, especially charts, graphs or manuals. Although 99 guidelines also mentioned the ability of comprehending different genres and texts, during the past ten years of the TVEE, there was only one chart found in the reading comprehension section. This shows that there is a lack of variety in text types. Yet, 108 VHSCG added two reading skills related to understand the common charts and graphs: (1) *Understanding common charts and manuals used in the workplace*, and (2) *Guess the meaning of the words and infer the meaning from the pictures or graphs*. Therefore, future test of TVEE may include more different reading text types. Take the item in Research Test II made by College Entrance Examination Center in 2019 for example.



|   |  |
|---|--|
| <p><b>A</b></p> <p style="text-align: center;"><b>MARKETING PROFESSIONALS</b></p> <p>A major U.S. corporation in the health and nutrition industry has announced the opening of its direct sales division in Taiwan.</p> <p>The company offers the most lucrative compensation plan in the industry and has paid over \$3.5 billion NTD in commissions in just 6 years in the U.S. We are a group of top earners.</p> <p>Applicants should meet the following requirements:</p> <ol style="list-style-type: none"> <li>(1) Hold R.O.C. citizenship</li> <li>(2) Have a university degree and experiences in marketing</li> <li>(3) Be ambitious, energetic, and willing to learn</li> </ol> <p>If you believe you have what it takes to develop this business, please call (02) 2742-6996</p> | <p><b>B</b></p> <p style="text-align: center;"><b>Service Technician</b></p> <p>A local company requires a technician to repair and maintain electronic medical equipment.</p> <p>Applicants should possess a university degree in electronics. The selected candidate will undergo a training program to be conducted by our manufacturer's experienced technical personnel.</p> <p>If you are interested in the position, send your resume to P.O. box 594, Kaohsiung, 820. Or contact Ms. Chang at (07) 294-5078 for an interview.</p>                                      |
| <p><b>C</b></p> <p style="text-align: center;"><b>Wanted: Reporters &amp; Editors</b></p> <p><b>Qualifications:</b></p> <ul style="list-style-type: none"> <li>&gt; Strong command of English</li> <li>&gt; Ability to speak and read Chinese a must</li> <li>&gt; University degree</li> <li>&gt; Journalism education and/or experience a plus</li> <li>◆ Flexible work hours (30 hours per week)</li> <li>◆ Good work environment and great colleagues</li> <li>◆ Health insurance and annual leave provided</li> </ul> <p>Send resume and work samples, if available, to Ms. Alice Wu at The Asia Post, alicewu@asiapost.com.tw</p>   | <p><b>D</b></p> <p style="text-align: center;"><b>Southeastern Travel Services</b></p> <p><b>OPENINGS*****</b></p> <p style="text-align: center;"><b>TOUR GUIDES</b></p> <p><b>Duties:</b></p> <ul style="list-style-type: none"> <li>• Conduct tours for foreign visitors.</li> <li>• Assist with travel and transportation arrangements.</li> </ul> <p><b>Qualifications:</b><br/>Pleasant attitude. High school diploma. Good proficiency in English. Outgoing personality.</p> <p style="text-align: center;">Call (04) 2723-2172 after 3:00 P.M.<br/>Ask for Gary Hu.</p> |

Q: Which advertisement says that the job offers an opportunity for a good salary?

(A) A\*                      (B) B                      (C) C                      (D) D

(Research Test II, 2019)

The reading text is composed of four job advertisements. Test-takers are required to understand the content of each advertisement and find the best answer.

Here is another example for diverse texts from GSAET in 2020.

The flip-flop is the simplest shoe on the planet. It consists of a piece of rubber, plastic, leather, or woven material in the outline of a foot, with a strap holding the sandal to a wearer's toes. The name comes from the sound the sandals make when they slap the walking feet.

The earliest record of people wearing the flip-flop comes from Egypt, but many ancient cultures had their own variants of the footwear. In the Greek version, the toe strap ran between the first and second toes, while Roman sandals had the strap between the second and third toes. The Mesopotamians wore the strap between the third and fourth toes. In India, "toe knob" sandals had a knob between the first and second toes.

Modern flip-flops derive from Japanese *zōris*, which were often worn with socks dividing the big toe from the rest, and were typically made of rice straw. During World War II, Japan seized much of Southeast Asia's rubber. In 1945, devastated from the war, the country set about establishing a cheap industry that could rebuild its economy. The Japanese used their rubber reserves from the war to mass-produce the simplest Japanese footwear. Rubber thus replaced rice straw as the major material for the flip-flop.

In the 1950s, flip-flops became popular in the United States as soldiers returning from occupied Japan brought *zōris* home. The sandals have subsequently undergone redesign, often appearing in bright colors in line with Californian beach culture. They have remained popular due to their convenience, and are often worn with bathing suits or summer clothing. Some people also wear dressy versions for more formal occasions.

Despite their popularity, flip-flops provoke some questions. Their simple design is responsible for many foot injuries. Another issue is the suitability of exposing feet on the street and places other than the beach. But even more serious is their environmental impact: Millions of plastic discards end up in landfills or the ocean, releasing chemicals and at the same time taking centuries to decompose.



41. Which culture most likely created the sandals shown in the picture?

- (A) Indian.      (B) Greek.      (C) Mesopotamian.      (D) Roman.

(GSAET, 2020)

The reading text is composed of an article and a picture. Test-takers are required to comprehend the article and understand what the picture refers to.

In a nutshell, the items involving top-down skills have been adopted in college entrance exams in Taiwan, it is anticipated that future TVEE may share similar features in cloze or in reading comprehension section, and the reading text types would be more diverse.





## CHAPTER 5

### CONCLUSION

This chapter concludes the present study, which comprises three main sections. The first section summarizes the major findings of the results and discussions to answer the three research questions. The second section provides pedagogical implications to English teacher in vocational high school and suggestions to testing administration of TVEE. Lastly, the limitations of the present study are explained in the third section.

#### **Summary of the Major Findings**

This section wraps up the major findings of the present study in accordance with three research questions which concern (1) the differences between 99 VHSCG and 108 VHSCG in terms of the statements of reading constructs, (2) the types of reading skills measured in TVEE from 2010 to 2019 and the correspondence between 99 VHSCG and TVEE, and (3) the possible impacts of 108 VHSCG on future TVEE.

#### **RQ1. What are the differences between 99 VHSCG and 108 VHSCG in terms of the statements of reading constructs?**

The present study analyzes the differences in reading abilities emphasized in the two curriculum guidelines. The analysis results show that with respect to the reading constructs highlighted in the two curriculum guidelines, the competence indicators listed in 99 VHSCG are less related to actual reading skills, while the learning performances listed in 108 VHSCG are in more in line with the skills required for

actual reading. This is because the new Curriculum Guidelines of 12-Year Basic Education put emphasis on the competence of integrating knowledge, ability, and attitude that would help students to face challenges in real-life situations. The rationale of the curriculum design changes from ability-orientation learning model to core competency-oriented learning model. In the light of curriculum design, 108 VHSCG proposes cross-domain learning instead of single-domain learning to enhance students' independent learning abilities. In addition to communication tool, the role of English has now become a learning medium for various subjects. Instead of memorizing grammar and vocabulary, learning more knowledge of different subjects through English reading is of more importance. Hence, many reading constructs not included in 99 VHSCG are listed in the new curriculum guidelines to mark the skills students should possess to comprehend reading: (1) identifying the elements of a story, (2) inferring the meaning of the words or the sentences by using the word structures, context, sentence structures, and discourse structures, and (3) guessing the meaning of the words and inferring the meaning from the pictures or graphs.

**RQ2. What reading constructs are measured by the reading comprehension test of the TVEE from 2010 to 2019 and how do the tested constructs correspond to 99 VHSCG?**

A total of 225 reading comprehension test items are analyzed by two coding schemes. One is based on the revised Hughes' (2003) Careful Reading Operations, and the other is the Curriculum Checklist (competence indicators). The two schemes are used together to analyze the correspondence between the test items and the curriculum guidelines.

First of all, in the cloze section, the findings show that among the sixteen types

of reading constructs, five types of constructs are tested in the past ten years of TVEE:

*Make propositional information or explanatory inferences, Understand common sentence patterns, Identify discourse markers, Interpret complex sentences, and Identify pronominal reference.* Most of the tested constructs (92.8%) are related to bottom-up skills and focus on the knowledge of vocabulary, sentence patterns, and discourse markers. As for the reading comprehension section, the findings show that among the sixteen types of reading constructs, seven types of constructs are tested:

*Locate the specific words or phrases from the text, Make propositional information or explanatory inferences, Identify main ideas, Identify pronominal reference, Infer the meaning of an unknown word or phrase from context, Identify discourse markers, and Recognize the attitudes and emotions of the writer.* Again, most of the tested constructs (80.5%) are related to bottom-up skills. The skills tested are: locating specific information, inferencing words, and identifying main ideas.

In terms of the test items that correspond to the competence indicators listed in 99 VHSCG, the item distribution is highly uneven. In total, 97.8% of test items measured *Comprehend short stories and understand the main ideas*, and 2.22% measured *Understand English notes, signs and instructions*. These results highlight two important aspects. First, because the competence indicators listed in the 99 VHSCG are not aimed at testing reading skills, the items cannot be classified precisely. On the other hand, the specification of competence indicators in the guideline is too general to provide specific description of what happened in the TVEE.

**RQ3. What changes can the new curriculum guidelines (108 VHSCG) bring about in future TVEE?**

There are four major points about the possible changes that the new curriculum guidelines bring about in future TVEE. Firstly, the reading texts may be made up of diverse texts including charts, graphs or manuals that specifically mentioned in 108 VHSCG. In the light of the fundamental beliefs and learning performances presented in new guidelines, future reading texts could be narrative and commentary, or multi-model texts including tables and advertisements. All the materials in real life texts may be the test items of reading test such as maps in brochures or timetables for local train. Second, with the addition of the skill *Infer the meaning of the words or the sentences by using the word structures, context, sentence structures, and discourse structures*, discourse structures and text structures would receive more emphasis. Future reading tests of TVEE may involve more items aiming at measuring the ability of identifying the cohesion and coherence between the sentences or paragraphs by analyzing the topic, text types, and text features. Third, the reading test may test students' ability to apply their logical inference ability and critical thinking to answer reading comprehension questions. After all, in the era of information explosion, knowing how to grasp key information and make appropriate responses are indispensable life skills for students. Finally, in future test, items involving more top-down skills would be emphasized. On the basis of the discussed literature and the first two research results of the present study, though top-down skills have rarely been measured in the past TVEE, they may be the focus of the test in the future with the emphasis of the skill in the new curriculum guidelines. The possible changes would correspond to the core value and specification of the new guidelines.

## **Pedagogical Implications**

From the analysis results, two suggestions are provided to vocational high school English teachers. The first implication is that the teaching materials should consist of diverse texts. The diverse texts include continuous text and non-continuous text. The former includes narrative text, explanatory text, essay text, instructions, document or record, and hypertext; the latter includes charts, graphs, tables, maps, information sheets, and advertisements. Because the new guidelines put emphasis on understanding different genres, it is important for teachers to provide and design various texts for reading. The second implication is that the focus of reading instructions in class should shift from bottom-up practice of vocabulary, grammar, and sentence patterns to top-down approaches. According to many researchers, readers would have problems in reading if they depend only on bottom-up or top-down skills (e.g. Rumelhart, 1976; Coady, 1979; Carrell, 1988; Grabe, 2000; Richards & Schmidt, 2003; Grabe & Stoller, 2002). Teachers can design more extensive reading activities for students to accumulate knowledge of vocabulary, achieve reading comprehension and enjoy reading (Manson & Krashen, 1997; Bell, 2001; Alyousef, 2006; Shen, 2008). In short, the pedagogical implications of the present study suggest that teachers provide diverse reading texts for students to read and strengthen their top-down skills to comprehend reading.

## **Limitations and Suggestions**

The study is not comprehensive enough. Feedback from the test takers and the teachers in vocational high school are not included in the study. Future studies may elicit the feedback from both test takers and teachers to provide a reference for test designers and educators. Due to the fact that there is no test takers' actual reading

performance analysis on the cloze and reading comprehension section in the TVEE, the present study cannot further discuss what reading skills students are good at, and what skills need to improve. It is recommended that future research collect item analysis of reading test in the TVEE to provide a better understanding of Taiwan vocational high school students' English reading ability.



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