

Chapter 2

Development of the Framework of Language Use

Abstract The purpose of this chapter is to situate the study within the context of currently existent theoretical framework in relation to the assessment of reading comprehension and investigation of the relationships between strategy use and reading test performance. The review of theoretical studies comprises five sections. The first section introduces Hymes' (1967, 1972) theory of communicative competence. This is followed by Canale and Swain's (1980) and Canale's (1983a) model of communicative competence. Next, Bachman's (1990) framework of communicative language ability is presented. Finally, Bachman and Palmer's (1996, 2010) most recent framework of language use is introduced and reviewed. This chapter ends with a discussion of the relevance of the aforementioned theoretical studies to the current study.

The primary purpose of language testing is to make inferences and draw conclusions about test takers' language ability. Arguably, the development and use of any language test should be informed by the consideration of the totality of language ability (Bachman & Palmer, 1996). As such, language ability needs to be defined in sufficiently precise and accurate terms (Bachman, 1990). In the part that follows, the historical development of the framework of language and communication ability in relation to second language teaching, learning, and testing will be reviewed and discussed with a focus on two aspects: (1) development of the dimensions of language and communication ability, and (2) development of the framework of strategic competence.

Influenced by the structuralist theory of language, Lado (1961) proposed his skills and component model in which language was viewed as consisting of independent elements such as pronunciation, morphology, syntax, and lexis. The elements of language were related to each other and integrated the skills of speaking, listening, reading, and writing. Lado advocated discrete-point testing in language elements measurement.

Drawing on Lado's (1961) concept of language proficiency, Carroll (1968) put forth his definition of language competence in terms of independent elements (i.e., phonology, orthography, grammar, and the lexis). However, Carroll argued that test

tasks should be designed with the aim of predicting language use that test takers may encounter in real-life situations (Purpura 2004). Thus, Carroll (1961) proposed using integrative tasks to complement discrete-point approaches to measuring learners' ability to use language knowledge. However, Lado's (1961) and Carroll's (1968) models did not indicate how skills and language knowledge are related (Bachman, 1990). It was not clear whether different skills are simply language elements in different modalities or totally different from each other in quality.

2.1 Hymes' (1967, 1972) Theory of Communicative Competence

One of the most influential discussions of language performance in applied linguistics is Hymes' (1967, 1972) theory of communicative competence (McNamara, 1996). Hymes proposed his concept of communicative competence in reaction to Chomsky's (1965) distinction between language competence and performance (Widdowson, 1989).

Chomsky's view of underlying language competence and performance engendered much discussion and even controversy though his seminal work *Syntactic Structure* is widely recognized as one of the most important publications in twentieth-century linguistics. For example, Campbell and Wales (1970) pointed out that Chomsky's restricted view of competence omitted by far the most important linguistic ability, which is "the ability to produce or understand utterances which are not so much grammatical but, more important, appropriate to the context in which they are made" (p. 247). Hymes (1972) concurred with Campbell and Wales and asserted that there was a major gap in Chomsky's definition due to his ignorance of the issue of appropriateness.

On this basis, Hymes defined communicative competence as a person's capabilities which are dependent on both his tacit knowledge and ability for use (Hymes, 1972). In other words, for Chomsky, competence is knowledge, but for Hymes, competence is knowledge and ability. In addition, Hymes identified four parameters of communicative competence—possibility, feasibility, appropriateness, and performance—which are delineated as follows (p. 281):

1. Whether (and to what degree) something is formally possible;
2. Whether (and to what degree) something is feasible in virtue of the means of implementation available;
3. Whether (and to what degree) something is appropriate (adequate, happy, successful) in relation to a context in which it is used and evaluated;
4. Whether (and to what degree) something is in fact done, actually performed, and what its doing entails.

According to Widdowson (1989), Hymes extends Chomsky's concept of competence in two ways. First, he includes aspects of knowledge other than grammar (i.e., the knowledge of what is feasible, appropriate, and actually performed). The first parameter can be perceived as grammatical competence, while the other three can be considered as pragmatic competence. Second, Hymes includes the dimension of ability for use, indicating there are two components in Hymes' competence: knowledge and ability. Additionally, the two components are related to the four parameters of knowledge (possibility, feasibility, appropriateness, and performance), respectively, which boils down to eight elements in contrast to Chomsky's two elements model.

In summary, Hymes's theory of communicative competence broadened the scope of Chomsky's model. Therefore, it provided an important theoretical foundation for the subsequent development of theory of communicative competence for second language teaching, learning, and testing.

2.2 Canale and Swain's (1980) and Canale's (1983a) Model of Communicative Competence

Motivated by Hymes (1967, 1972) and other linguists' work (e.g., Allan & Widdowson, 1975; Munby, 1978; Savignon, 1972), Canale and Swain (1980) proposed their influential theory of communicative competence which was refined by Canale (1983a, b). In their initial framework, there were three components of communicative competence: (1) grammatical competence, which includes knowledge of lexical items and of rules of morphology, syntax, sentence-grammar semantics, and phonology; (2) sociolinguistic competence, which is made up of two sets of rules: sociocultural rules of use and rules of discourse; and (3) strategic competence, which includes verbal and non-verbal communication strategies that may be called into action to compensate for breakdowns in communication. Notably, strategic competence comprises two main types: the strategies related to grammatical competence and those associated with sociolinguistic competence (Canale & Swain, 1980). Canale and Swain (1980) also asserted that certain strategies were expected to change with age and second language proficiency. Stern (1978) believed that as coping strategies, they were more likely to be acquired through experience in real-life situations instead of through classroom practice.

Subsequently, Canale (1983a, b) revised the model and added another component (i.e., discourse competence) to distinguish it from sociocultural competence. Discourse competence refers to the knowledge of the connections among utterances in a text to form a meaningful whole. Canale (1983b) extended the definition of strategic competence to include both compensatory and enhancement functions of production strategies. In other words, strategies play the roles of compensating for

breakdowns in communication due to lack of language competence and enhancing the effect of communication.

In summary, it is generally acknowledged that Canale and Swain's (1980) and Canale's (1983a, b) models of communicative competence have broadened our view of language and provided the main theoretical framework for communicative language teaching and testing. Building on Hymes' (1972) model, Canale and Swain incorporated grammatical competence, sociolinguistic competence, and strategic competence into the model of language knowledge. In addition, they introduced the notion of discourse competence. However, the problem with this model is that it fails to point out how its various components interact with each other and with the context in which language use happens. This problem is addressed in Bachman's (1990) model of communicative language ability which is discussed below.

2.3 Bachman's (1990) Framework of Communicative Language Ability

Inspired by Canale and Swain (1980), Canale (1983a, b), and many others' work, Bachman (1990) proposed his multi-componential model of communicative language ability (CLA). Bachman's (1990) CLA model comprises three components: language competence, strategic competence, and psychophysiological mechanisms.

According to Bachman's (1990) model, language competence consists of a set of specific knowledge components employed in communication. It can be subdivided into organizational competence and pragmatic competence. There are two components in organizational competence: grammatical competence and textual competence. Grammatical competence refers to the competencies in language use which comprise some independent knowledge such as knowledge of vocabulary, morphology, syntax, and phonology/graphology. Textual competence involves knowledge of the conventions for joining sentences together to form a text of two or more sentences structured by rules of cohesion and rhetorical organization. Pragmatic competence includes two components: illocutionary competence and sociolinguistic competence. Illocutionary competence pertains to knowledge of the pragmatic conventions for performing acceptable language functions, whereas sociolinguistic competence includes knowledge of the sociolinguistic conventions for performing language functions appropriately in a given context.

In addition, strategic competence comprises three components: assessment, planning, and execution. Assessment enables us to (1) identify the information needed for the realization of the communication goal; (2) determine our language resources available in achieving the communicative goal; (3) make sure that the abilities and knowledge are shared by our interlocutor; and (4) evaluate how well the communicative goal has been achieved. Planning helps retrieve relevant knowledge from language users and formulates a plan to realize the communicative goal.

Drawing on the relevant psychophysiological mechanisms, execution implements the plan “in the modality and channel appropriate to the communicative goal and the context” (Bachman, 1990, p. 103). Psychophysiological mechanisms are the neurological and physiological processes in the execution of language use (Bachman, 1990). In addition, knowledge structure, which is part of the proposed model, refers to language users' topical knowledge about the world, and the context of situation concerns the situations characteristic of the language use.

Further, Bachman (1990) elaborates on strategic competence as follows:

The interpretation of discourse, in other words, requires the ability to utilize available language competencies to assess the context for relevant information and then match this information to information in the discourse. It is the function of strategic competence to match the new information to be processed with relevant information that is available (including presuppositional and real-world knowledge) and map this onto the maximally efficient use of existing language abilities. (p. 102)

To summarize, Bachman's (1990) model of communicative language ability is multi-componential and shares the same essential components as Canale and Swain's (1980). The significant feature of Bachman's model is that it separates strategic competence (i.e., more general skills in language use) from language competence (i.e., knowledge of and about language), indicating that strategic competence is not part of language competence (McNamara, 1996). According to Bachman (1990), strategic competence is defined as “a general ability, which enables an individual to make the most effective use of available abilities in carrying out a given task” (p. 106). In other words, strategic competence, which includes assessing, planning, and executing, is better understood as ability or capacity rather than an area of knowledge.

The separation of strategic competence from language knowledge is especially significant and relevant to the present study. As stated by Messick (1989), validity is “an integrated evaluative judgment of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of inferences and actions on test scores” (p. 13). Bachman's model, to some degree, provides the theoretical rationale for such inferences about test takers' ability on the basis of their test performance. In addition, Bachman's model helps recognize the role of strategic competence in the test-taking situation. This provides the theoretical support for the investigation of test takers' strategy use in reading comprehension tests in the present study.

2.4 Bachman and Palmer's (1996, 2010) Framework for Language Use

Bachman and Palmer (1996) elaborated on this model further. They made three main types of changes to Bachman's (1990) model:

- (a) There is an explicit modeling of the role of non-cognitive factors, including affective schemata and personal characteristics.
- (b) Strategic competence has been conceived as a set of metacognitive strategies.
- (c) There are some nominal changes. For example, knowledge structures are termed topical knowledge, etc.

First of all, Bachman and Palmer (1996) claimed that personal characteristics such as age, sex, nationality, and level and type of education are not part of test takers' language ability. These individual attributes are supposed to influence their performance on language tests. Affective schemata were thought of as "the affective or emotional correlates of topical knowledge" (p. 65) which provide the basis for language users to assess the characteristics of the language use task and its environment in terms of past emotional experiences in similar contexts.

In addition, similar to Bachman (1990), Bachman and Palmer (1996) propose that language knowledge comprises two broad categories: organizational and pragmatic knowledge. Organizational knowledge is subdivided into grammatical knowledge and textual knowledge. Pragmatic knowledge includes two areas of knowledge: functional knowledge and sociolinguistic knowledge. Functional knowledge is concerned with individuals' "ability to interpret relationships between utterances or sentences and texts and the intentions of language users" (p. 69). It includes knowledge of ideational, manipulative, heuristic, and imaginative functions. Sociolinguistic knowledge refers to language users' knowledge to create or interpret language appropriate to a particular language use setting. It includes knowledge of dialects/varieties, registers, natural or idiomatic expressions, cultural references, and figures of speech. In conclusion, organizational and pragmatic competences are two important components of individuals' language competence. In this study, organizational competence is operationalized by students' performance on the CET-4 Reading subtest. However, pragmatic competence is excluded from the present study due to the limitations of the study scope.

Strategic competence is viewed as "a set of metacognitive components or strategies" which "provide a cognitive management function in language use" (Bachman, 1990, p. 70). It comprises three components as follows:

- (1) goal setting, which involves deciding what the language user is going to do when facing language use or test tasks;
- (2) assessment, through which the individual associates his/her topical knowledge and language knowledge with the language use setting and tasks; and
- (3) planning, which concerns the individual's decision of how to use language knowledge, topical knowledge, and affective schemata to complete the tasks successfully.

Bachman and Palmer (2010) updated the framework of language use and incorporated cognitive strategies into it. According to them, language users/test takers' focal attributes are still part of language ability which comprises language knowledge and strategic competence. The peripheral attributes of language users include personal attributes, topical knowledge, affective schemata, and cognitive

strategies. They argued that cognitive strategies are “what language users employ when they execute plans” in actual language use situations (p. 43). Thus, in Bachman and Palmer's (2010) model, both metacognitive and cognitive strategies are included. As the core of strategic competence, metacognitive strategies are part of the test takers' focal attributes while cognitive strategies are perceived as test takers' peripheral features.

The following example of reading tests illustrates the interactions among test takers' language knowledge and their metacognitive and cognitive strategy use. When learners take a reading test, they demonstrate their ability in using the target language through their response to test items by tapping into their knowledge in vocabulary, morphology, syntax, and phonology. In addition, their textual competence is tested while they tackle the items examining their text comprehension ability. In responding to the reading test items, learners appear to make different evaluations of what are required for accomplishing the task and of their own language resources. On this basis, they formulate a plan to complete the test. For example, they may decide to use more inference-making strategies in reading the text and responding to the items if they have sufficient knowledge in morphology. In addition, if they find that they do not have the required lexical knowledge, they may formulate plans to skip items for the purpose of better time management. In this study, analysis of empirical data would shed light on the relationships between metacognition, cognitive strategies, and students' test performance.

2.5 Relevance to the Study

The previous section reviews the historical development of the framework of language and communication ability in relation to second language teaching, learning, and testing by focusing and elaborating on the influential perspectives and models in this field. Among them, Bachman and Palmer's (1996, 2010) multi-componential view of language ability has provided a particularly productive and comprehensive theoretical framework for both research and practice of second language acquisition and testing (Bachman & Cohen, 1998; Purpura 2004).

Bachman and Palmer's model has been widely accepted as a more useful and complete model of language ability than earlier ones (Chapelle, Grabe, & Berns, 1997). For example, this model incorporates the effects of personal characteristics, topical knowledge, and affective schemata into the framework. In other words, it takes into consideration how individuals' attributes interact with one another as well as how these attributes interact with the characteristics of the target language use contexts (Liao, 2009). In addition, strategic competence, which is defined as “a set of metacognitive strategies” (Bachman & Palmer, 1996, p. 70), is perceived as providing a cognitive management function in language use which links an individual's characteristics within and with those of language use tasks and settings. Thus, this model provides a general theoretical background for the investigation of test takers' strategy use and test performance in this study.

From the perspective of language knowledge, this study examines Bachman and Palmer's (2010) notion of organizational knowledge measured by the CET-4 Reading subtest by means of morphology, syntax, lexis, cohesion, and coherence, etc. In addition, this study also attempts to investigate Bachman and Palmer's (2010) definition of strategic competence, especially regarding the relationships between metacognitive and cognitive strategies, and reading test performance. Finally, their model provides the general background for the ReTSUQ which was developed and used in this study.

In summary, the review of the frameworks of language and communication ability provides historical and developmental perspectives on how language ability is defined and operationalized. In the following section, relevant literature on reading comprehension assessment will be reviewed and introduced.

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