Chapter 7

CHINESE LANGUAGE LEARNING AND THE RASCH MODEL

*Measurement of students’ achievement in learning Chinese*

Ruilan Yuan
*Oxley College, Victoria*

Abstract: The Rasch model is employed to measure students’ achievement in learning Chinese as a second language in an Australian school. Comparison between occasions and between year levels were examined. The performance in Chinese achievement tests and English word knowledge tests are discussed. The chapter highlights the challenges of equating multiple tests across levels and occasions.

Key words: Chinese language, Rasch scaling, achievement

1. INTRODUCTION

After World War II, and especially since the middle of the 1960s, when Australia’s involvement in business affairs with some Asian countries in the Asian region started to occur, more and more Australian school students started to learn Asian languages. The Chinese language is one of the four major Asian languages taught in Australian schools. The other three Asian languages are Indonesian, Japanese and Korean. In the last 30 years, like other school subjects, some of the students who learned the Chinese language in schools achieved high scores in learning the Chinese language, and others were poor achievers. Some students continued learning the language to year 12, while most dropped out at different year levels. Therefore, it is considered worth investigating what factors influence student achievement in the Chinese language. The factors might be many or various, such as school factors, factors related to teachers, classes and peers. This
study, however, only examines student-level factors that influence achievement in learning the Chinese language.

The Chinese language program has been introduced into Australian school systems since the 1960s. Several research studies have noted factors influencing students’ continuing with the learning of the Chinese language as a school subject in Australian schools (Murray & Lundberg, 1976; Fairbank & Pegalo, 1983; Tuffin & Wilson, 1990; Smith et al., 1993). Although various reasons are reported to influence continuing with the study of Chinese, such as attitudinal roles, peer and family pressure, gender difference, lack of interest in languages, the measurement of students’ achievement growth in learning the Chinese language across year levels and over time, and the investigation of factors influencing such achievement growth have not been attempted. Indeed, measuring students’ achievement across year levels and over time is important in the teaching of the Chinese language in Australian school systems because it may provide greater understanding of the actual learning that occurs and enable comparisons to be made between year levels and the teaching methods employed at different year levels.

2. DESIGN OF THE STUDY

The subjects for this study were 945 students who learned the Chinese language as a school subject in a private college of South Australia in 1999. The instruments employed for data collection were student background questionnaires and attitude questionnaires, four Chinese language tests, and three English word knowledge tests. All the data were collected during the period of one full school year in 1999.

3. PURPOSE OF THE STUDY

The purpose of this chapter is to examine students’ achievement in learning Chinese between and within year levels on four different occasions; and to investigate whether proficiency of English word knowledge influences the achievement level of Chinese language.

In the present study, in order to measure students’ achievement in learning the Chinese language across years and over time, a series of Chinese tests were designed and administered to each year from year 4 to year 12 as well as over school terms from term 1 to term 4 in the 1999 school year. It was necessary to examine carefully the characteristics of the test items before the test scores for each student who participated in the