A Factor Analysis of Chinese University EFL Learners’ Foreign Language Classroom Anxiety

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ABSTRACT: The subjects of the present study were 344 college students from China. They responded to a 5-point likert scale questionnaire adapted from Horwitz’s Foreign Language Classroom Anxiety Scale (FLCAS). Their responses to the questionnaire were submitted to exploratory factor analysis and confirmatory factor analysis (with the help of SPSS and AMOS statistical package) for identifying anxiety dimensions. The results showed that there existed four dimensions of the FLCAS and the four-factor model adequately fit the data. The fit indices also suggested that the instrument measuring the dimensions of anxiety specific to college students in China was construct-wise valid and reliable for future use and it may also provide some reference for measuring anxiety dimensions in similar cultural context countries like Korea and Japan.

Key words: Principal component analysis; Confirmatory factor analysis; FLCAS; Chinese Mainland Context

I . Introduction

Foreign Language Anxiety (FLA), one of the most important affective variables on foreign language learning, has been the focus of many studies. For example, Horwitz and Garza(2000) suggested a general model of Foreign Language Classroom Anxiety Scale (FLCAS), in which we can observe the anxiety among students trying to communicate in English in form language teaching settings (Matsuda & Gobel, 2004). Following this lead, a large number of research investigated the latent constructs of FLCAS in different contexts (Aida, 1994; Pascual et al., 2001; Matsuda, 2004; Mak, 2011; Park, 2014; Liu, 2015). Despite adequate studies about the latent constructs of FLCAS in different cultural contexts, the investigation of the constructs in China with both exploratory and confirmatory factor analysis has been lacking. The purposes of this study is to identify the constructs of the anxiety dimensions in Chinese context and to provide some reference for measuring anxiety dimensions in similar cultural context countries like Korea and Japan.

II . Literature Review

1. Foreign Language Classroom Anxiety Scale

Anxiety, the subjective feeling of tension, apprehension, nervousness, is a topic that is closely related to human psychology. Previous research concerning foreign language learning anxiety, pointed out that anxiety was indeed an important variable to consider in speech production (Thomas, 2008; Cheng, 2010). Some researchers went further to consider the anxiety in foreign language classroom, a place where formal teaching and learning took place, and a place which could easily cause...
anxiety. Horwitz, & Cope (1991) defined it as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process.” Following this trend, research about the negative effects of foreign language classroom anxiety has flourished in the last two decades (Aida, 1994; Horwitz and Garza, 2000; Woodrow, 2006; Tallon, 2009; Liu, 2010), among which, the invention of anxiety scale by Horwitz, & Cope (1983) had a far-reaching influence on other studies in this area. In particular some researchers focused their study on exploring the effects of foreign language anxiety on second language acquisition; assessing the degree of FLCAS in classroom and investigating the validity of the scale (Zhang, 2000; Matsuda and Gobel, 2004; Elkhafaifi, 2005; Park, 2014; Mei, 2015; Woodrow 2016).

2. Factor analysis of FLCAS

The exploratory factor analysis is an interdependence technique whose primary purpose is to define the underlying structure among variables and is commonly used in data reduction to identify a small number of factors that explain most of the variance observed in a much bigger number of variables (Hair et al., 2014). Since Aida’s (1994) starting factor analysis, some researchers have been keen on identifying the underlying components of FLCAS with the application of exploratory factor analysis.

When Horwitz & Cope developed the FLCAS (1986), they thought foreign language classroom anxiety was composed of three distinct anxiety components: Communication Apprehension, Test Anxiety and Fear of Negative Evaluation. Horwitz’s analysis of anxiety components of FLCAS yielded a 0.93 Cronbach’s alpha coefficient and a high reliability (r=.83, p<0.1). Aida (1994) examined anxiety dimensions among 96 university students to see whether the structure identified in her research coincided with the three-factor structure reported by Horwitz and Cope (1986). Aida used the principal component analysis (PCA) with varimax rotation to extract four significant latent factor. The four factors extracted from her approach were Speech Anxiety, Fear of Failing the Class, Comfortableness with the Foreign Language and Negative Attitudes, among which Speech Anxiety and Fear of Failing the Class appeared as the most important components, accounting for 37.9% and 6.3% of the total variance respectively, which partially supported Hortwiz’s construct.

Pascual et al. (2001) replicated Aida’s study with 198 post-beginner students of English at an Italian official language school. This study yielded a cronbach’s alpha 0.89 and a high rest-retest reliability (r=.9041 p<.000). In this study, PCA with varimax rotation produced four significant latent factors, however, the four factors found in their research was somewhat different from the four factors extracted by Aida, in which some of their items loaded on different factors identified by Aida.

Matsuda (2004) investigated the anxiety dimensions using FLCAS in Japan. The PCA with varimax rotation was conducted on the data from 252 Japanese university students majored in English, yielding seven latent factors with eigenvalues greater than one. However, the last five factors were discarded because only a few items loaded significantly on them. The first factor accounted for 31.1% of total variance, labeled as General English Classroom Performance Anxiety; while the second factor accounted for 6.1% of total variance, labeled as Low self-Confidence in Speaking English.

Mak (2011) also run factor analysis with FLCAS in Hong Kong. For his 313 subjects, he adapted the 5-point likert scale to four-point scale to avoid the middle point and extracted five latent factors, namely, Speech Anxiety with Native Speakers, Negative Attitudes towards English Class, Negative Self-evaluation, Fear of Failing the Class and Consequences of Personal Failure.

Park (2014) conducted an exploratory factor analysis with the instrument of FLCAS in the Korean context. Two latent factors was extracted from the data of 217