

## Exploring Variables of Hospitality and Tourism Students' English Communicative Ability in Taiwan: An Structural Equation Modeling Approach

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**Abstract:** *English has been the lingua franca for wide spectrum of business operations and hospitality and tourism (H & T) industries are no exception. Professionals of these two industries are expected to have good communicative competence in English; nevertheless, no standardized scale has been developed. Bachman's communicative language ability (CLA) model is so far considered as the comprehensive one to assess the abilities language learner's communicative abilities. The present study aims to develop a scale for H & T students' communicative competence in English. Exploratory factor analysis (EFA) and structural equation model (SEM) were employed. Twenty one items were developed and 390 English teachers and managers of H & T industries (n= 390) were invited to respond them. SEM analysis and the results showed that illocutionary competence outweighed sociolinguistic competence in pragmatic knowledge while grammatical competence was considered to be more important than textual competence in organizational knowledge.*

**Key Words:** *Communicative Competence; EFL Learning; Hospitality and Tourism (H & T) Industries; Structural Equation Model*

### 1. Introduction

The status of English as the international language cannot be ignored by nonnative speakers of English, particularly to hospitality and tourism (H & T) industries worldwide (Hsu, 2011). For professionals of these two industries, communicative competence of English has been considered as one of the most important standards for employability. However, EFL teachers of H & T programmes around the world have experienced a similar situation that students of the same EFL programmes often end up with various levels of proficiency. Given the fact of the importance of English as a major tool of communication, professionals of H & T industries suggested that second-language studies (particularly English) should be emphasized in the curriculum for the most effective training to prospective workforces of these two industries

Furthermore, the curricular design of EFL courses goal in Taiwan has swift from emphasizing the grammar and vocabulary learning only towards paying gravity attention to learners' overall communicative competence. However, the measurement of one's communicative competence is comprised of various constructs of linguistic abilities (Gao *et al.*, 2007). For example, McNarama (1996) postulated that when one's second/foreign language communicative abilities are measured, three dimensions should be conceptualized, namely, knowledge of language, strategic competence as well as the actual output for real time communication. The communicative language ability (CLA) model proposed by Bachman and

Palmer in 1996 is by far being considered as a comprehensive model which covers not only language competence but also strategic competence (Phakiti, 2008). Nevertheless, it is to the author's knowledge that only handful empirical studies have validated this model, especially the language competence is on the stake. Therefore, the main goal of this present study is to explore to the aforementioned constructs of EFL learners' communicative competence in English and further articulate the following under-researched issues:

1. What are the variables to the constructs of Bachman's CLA Model from the standpoint of EFL teachers and managers of H & T industries?
2. How are these latent variables attributed to the constructs of CLA Model?

In order to shed light on these issues, the pertinent academic works are reviewed for the rationale of this present research. By doing so, how these issues have been explored and discussed to date and to what extent the current study can contribute to scholars as well as practitioners to receive insightful and constructive information. Research methodology will be described afterwards which includes participants recruitment, instrumentation design, procedure this research is to be undertaken and the statistical techniques employed by this study. Results of analyses as to the findings will be described accordingly followed by the discussion and conclusion.

## **2. Rationale**

### **2.1 Definition of Competence and Language Competence**

The concept of competence refers to one's knowledge, skills, attitude as well as professional value that enable him/her successfully and appropriately accomplish the tasks (Knowles, 1970; Millar, Mao, & Moreo, 2008). Stasz (2000) further redefined this term as a comprehensive capability of complicated and dynamic interrelation of knowledge and skills which are required for professional performance as well as motivation to carry out the tasks. Since the 1980s, educators and researchers of hospitality and tourism education have been looking for the competences that students of these programmes should have before they complete their studies and a large volume of works have been done (Millar, Mao, & Moreo, 2008). It has attracted practitioners' attention that while facing the trend of globalization, effective communication within multi-cultural context will be a prerequisite competence for the graduates of hospitality management programmes (Chen & Hsu, 2007). Therefore, for the professional competence that hospitality graduates are expected to be equipped, communicational skills in English has been considered as a required one (Johanson, Ghiselli, Shea, & Roberts, 2010). Despite the importance of this topic, rare empirical work has been undertaken and this research aims to fill the gap and explore this under-researched topic.

Language competences refer to the knowledge that one language user acquires before he/she produce the outputs of that target language. (Hsu, 2011). Littlemore and Low (2006) further elaborated and stated that language competence is "the ability to deal with knowledge-based components of language that have been isolated as theoretical areas, such as syntax or

cohesion” (p. 274). Generally speaking, language tests are usually designed to assess the test-taker’s performance, which is the output that one produces within a specific timeframe. Competence of a language is a somewhat abstract concept which is not easy to measure and this current study does not attempt to design a test for such measurement; instead, it is to propose indicators on what hospitality and tourism students should attain in the communicative competence of English for them being able to fulfill the tasks successfully in the industry. It is further to provide a guideline for EFL teachers of these two programmes while designing their instructional activities to achieve effective outcomes.

## 2.2 Bachman’s Communicative Language Ability (CLA) model

Thorough discussions on measuring language learner’s proficiency and communicative competence emerged in the 1960s (Lado, 1961; Carroll, 1961) and the focus was on two facets: skills and components of the target language. However, while the EFL pedagogy tended to be communicative-oriented, the concept about the assessment of communicative competence started to take more non-linguistic variables into account (Hsu, 2011). The communicative language ability (CLA) model proposed by Bachman (1990) is acknowledged as the comprehensive one to date (Zhang, 2006). The CLA model has changed the landscape of language assessment due to its underpinning rationale of including non-linguistic factors in the communicative competence (Zang, 2006). For this reason, new paradigm based upon CLA model has been popular in language testing these days. One example was the English proficiency test designed for teachers who are nonnative speakers of English was developed in Australia (Conaim & Falvey, 2004). Bachman (1990) postulated that three components of competence (language, strategic, and psychophysiological mechanism) should be taken into consideration while language users are to partake in the conversation. Language competence is the basis for the other components and learner’s language competence also includes other facets which are “organizational knowledge” and “pragmatic knowledge.” The organizational competence specifically indicates the learner’s ability in manipulating the structures of the target language in a grammatical fashion whereas pragmatic competence one focuses on the learner’s control over the sociolinguistic side of the target language (Bachman, 1990). Within this framework, organizational competence comprises “grammatical competence” and “textual competence” while pragmatic competence covers “illocutionary competence” and “sociolinguistic competence”. According to the definition coined by Littlemore & Low (2006), grammatical competence refers to an individual’s ability to command the grammar of the target language and textual competence focuses more on the cohesive organization of the text. Illocutionary competence represents a language learner’s ability to acquire the information conveyed through the words that the other party use and sociolinguistic competence covers the cultural reference of the target language to produce accurate and appropriate language use. The detailed information about the CLA Model is presented in Table 1.

Table 1

## Language Competence of Bachman's CLA Model

Language competence			
Organizational Knowledge		Pragmatic Knowledge	
Grammatical competence	Textual competence	Illocutionary competence	Sociolinguistic competence
<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Morphology</li> <li>• Syntax</li> <li>• Phonology/graphology</li> </ul>	<ul style="list-style-type: none"> <li>• Cohesion</li> <li>• Rhetorical organization</li> </ul>	<ul style="list-style-type: none"> <li>• Ideational functions</li> <li>• Manipulative functions</li> <li>• Heuristic functions</li> <li>• Imaginative functions</li> </ul>	<ul style="list-style-type: none"> <li>• Sensitivity to dialect or variety.</li> <li>• Sensitivity to register.</li> <li>• Sensitivity to naturalness.</li> <li>• Ability to interpret cultural references and figures of speech.</li> </ul>

Up to date, even though many studies have been designed to examine and discuss the feasibility of Bachman's CLA model (McNamara, 1990; Douglas, 2000; Purpura, 2004), no pertinent research has been conducted to evaluate Taiwanese students' communicative competence in English through the lens of Bachman's model, particularly when prospective employees of H & T industries are at stake.

### 3. Research Design

The instrument used to list the possible variables of H & T students' communicative competence in English was designed on the basis of Bachman's CLA Model. After the instrument was completed, three professors (one was from Department of Applied English while the other one was with Department of Tourism Management. The third professor was affiliated with Graduate Institute of Hospitality Education) were invited to review the question items. After a series of meetings with the research, the final draft of questionnaire was sent out for preliminary test, 30 high school teachers of H & T programmes were invited to complete the questionnaire. All the items were expected to be answered on a five-point Likert scale, ranging from 1 for "strongly disagree" to 5 for "strongly agree." Results of this pilot study confirmed that this final draft was good for formal research (Cronbach's alpha = .83).

The formal questionnaire was distributed to participants (n = 390) of the present study who were teachers had experience in teaching Hospitality and/or Tourism English at secondary or college level (n = 300). The other 90 participants were the current workforces of H & T

industries. They were briefed about the nature of this research project and assured that no personal information would be revealed. Furthermore, they were able to be excused from this research whenever they request and their data would be partialled out for further analyses. However, no participant made such request and thus all the collected data were included for statistical analyses.

While all the responded questionnaires were gathered, formal reliability statistics were performed with Cronbach's alpha to examine the internal consistency of question items. All the constructs had good reliabilities (Cronbach alpha were all above .85) which confirmed that all the items were internally consistent and the alpha coefficients were .93 for IC, .88 for SC, and .86 for GC. In term of the construct TC, there were 3 items included in this construct but the reliability test suggested one item should be partialled out for better internal consistency (Cronbach's alpha was .46 for three items but improved to .84 when the items were two). Afterwards, exploratory factor analysis (EFA) was administered to elicit the composite variables of the 4 proposed constructs of language competence in Bachman's CLA model. Results of Kaiser-Meyer-Olkin Measure (KMO) and Bartlett's Test indicated that the collected data was suitable for factor analysis (KMO = .95,  $p = .00$ ). With the extraction method of maximum likelihood and Promax with Kaiser Normalization rotation, four proposed factors extracted 21 question items through the administration of EFA. These 21 items composite 4 constructs and a hypothetical model was proposed for structural equation model. The hypothesized model was to be tested to see how well the collected data fitted the model. Results of EFA are featured in the following Table 2.

Table 2

## Results of Exploratory Factor Analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Communality
IC 1	.94				.47
IC 2	.92				.62
IC 3	.78				.68
IC 4	.78				.64
IC 5	.74				.52
IC 6	.72				.66
IC 7	.69				.51
IC 8	.68				.63
IC 9	.58				.70
IC 10	.42				.70
SC 1		1.0			.67
SC 2		.92			.70
SC 3		.80			.60

SC 4		.41		.67
GC 1			.95	.62
GC 2			.81	.46
GC 3			.66	.88
GC 4			.64	.78
GC 5			.57	.64
TC 1				1.0
TC 2				.57
Sum of squared loading	5.21	6.93	1.52	.97
% of variance	22.65	30.13	6.61	4.23
Explained Cumulative %	22.65	52.78	59.38	63.62
Cronbach's Alpha	.93	.86	.88	.84

#### 4. Results and Discussions

In many cases, when the variables of a research cannot be directly observed by the researchers, information on these latent variables can be collected through observable variables and statistical techniques such as factor analysis and structural equation modeling (SEM) are often the ones being employed, language testing domain is also included (Bachman, 2000). SEM can be considered as a confirmatory technique with extending interrelationships and covariation among latent variables (Schreiber, Nora, Stage, Barlow, & King, 2006) but the purpose of this study was to develop indicators for EFL learner's communicative competence and thus confirmatory factor analysis (CFA) would be necessary to test the feasibility of each construct for SEM. Maximum likelihood was chosen because the collected data were normally distributed. Details on CFA of four constructs are presented as follows:

##### 4.1 Construct of Illocutionary Competence

There were 10 items included in this construct, degree of freedom was 30 and 11 variables as well as 9 factor loadings were calculated which met the requirement of confirmatory factor analysis model. Standardized factor loadings of some variables were lower than .70 but still acceptable. Both Composite Reliability (CR) and Average Variance Extracted (AVE) was above the threshold (CR = .84 and AVE = .73). The model fit indices were not perfect but still acceptable for the further analysis (Chi-square/df = 4.73, CFI = .95, RMSEA = .09).

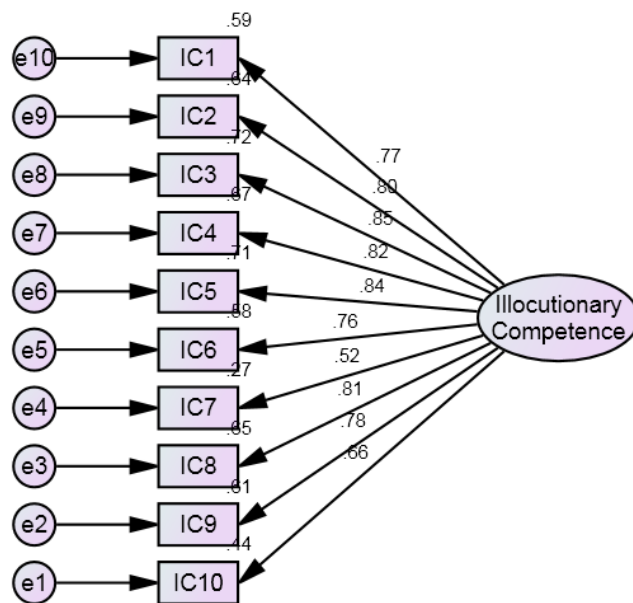


Figure 1. CFA of the Construct of Illocutionary Competence

#### 4.2 Construct of Sociolinguistic Competence

Four items were contained in the construct of Sociolinguistic Competence. Degree of freedom of this construct was 10 and 5 variables as well as 3 factor loadings were to be calculated which was considered to be appropriate for confirmatory factory analysis model. Out of four variables, three of their standardized factor loadings of some variables were above than .80 except the SC4 was a little lower than .7 benchmark. Both Composite Reliability (CR) and Average Variance Extracted (AVE) was above the threshold (CR = .89 and AVE = .66). The mode fit indices were not perfect but still acceptable for the further analysis (Chi-square/df = 5.57, CFI = .99, RMSEA = .11).

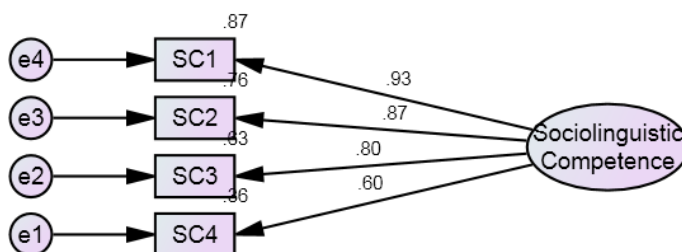


Figure 2. CFA of the Construct of Sociolinguistic Competence



### 4.3 Construct of Grammatical Competence

Five items were contained in the construct of Grammatical Competence. Degree of freedom was 15 and 6 variables as well as 4 factor loadings were calculated which was over-identified and to be appropriate for confirmatory factor analysis model. Out of four variables, three of their standardized factor loadings of some variables were above than .70 except the GC5. Both Composite Reliability (CR) and Average Variance Extracted (AVE) was above the threshold (CR = .86 and AVE = .56). The model fit indices were not perfect but still acceptable for the further analysis (Chi-square/df = 10.91, CFI = .94, RMSEA = .16).

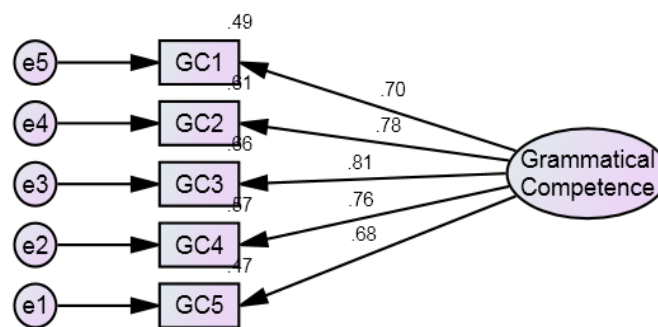


Figure 3. CFA of the Construct of Grammatical Competence

### 4.4 Construct of Textual Competence

There were only two items contained in the construct of Textual Competence. Degree of freedom was 3 but 3 variables and 1 factor loadings were to be calculated, which were under-identified and not good for confirmatory factor analysis. Both Composite Reliability (CR) and Average Variance Extracted (AVE) was above the acknowledged thresholds (CR = .84 and AVE = .73). Based on this information, it is appropriate to state that this construct has sound discriminant and convergent validity.

After the discriminant and convergent validities of each constructs were examined, the next step was to perform Bollen's two-step examination to test the interrelationship among the constructs.  $\chi^2/df = 3.3$ , CFI = .92, IFI = .92, TLI = .90, RMSEA = .08 indicated that the data fit the model quite well and the correlations between latent variables did not exceed .85 which rejected the possibility of collinearity. Nevertheless, the correlation coefficients between Illocutionary Competence and Grammatical Competence as well as Sociolinguistic Competence and Textual Competence were close to .80 which suggested a common factor could be found between two latent variables respectively. Results of Bollen's two-step examination supported the appropriateness of the following structural equation modeling.



### 4.5 Estimation of Structural Equation Model

The present study employed confirmatory factor analysis (CFA) to examine the proposed individual construct for validity, the SEM estimation was undertaken for investigate the interrelations among latent variables (Brown, 2006). Before the outset of discussing results of proposed model, goodness-of-fit of the data to the proposed model should be elaborated. Chi-Square statistic ( $\chi^2/df = 3.86$ ) was below the .5 level of acceptance. Root mean square error of approximation (RMSEA = .086) indicated the data was not perfect still fair to fit the model. Incremental Fit Index (IFI) as well as Comparative Fit Index (CFI) were above the benchmark of .90 which supported the goodness of fit. According to the results of model fit analysis, the proposed model was to describe the linear relationships among latent variables and the details are presented in the Figure 1.

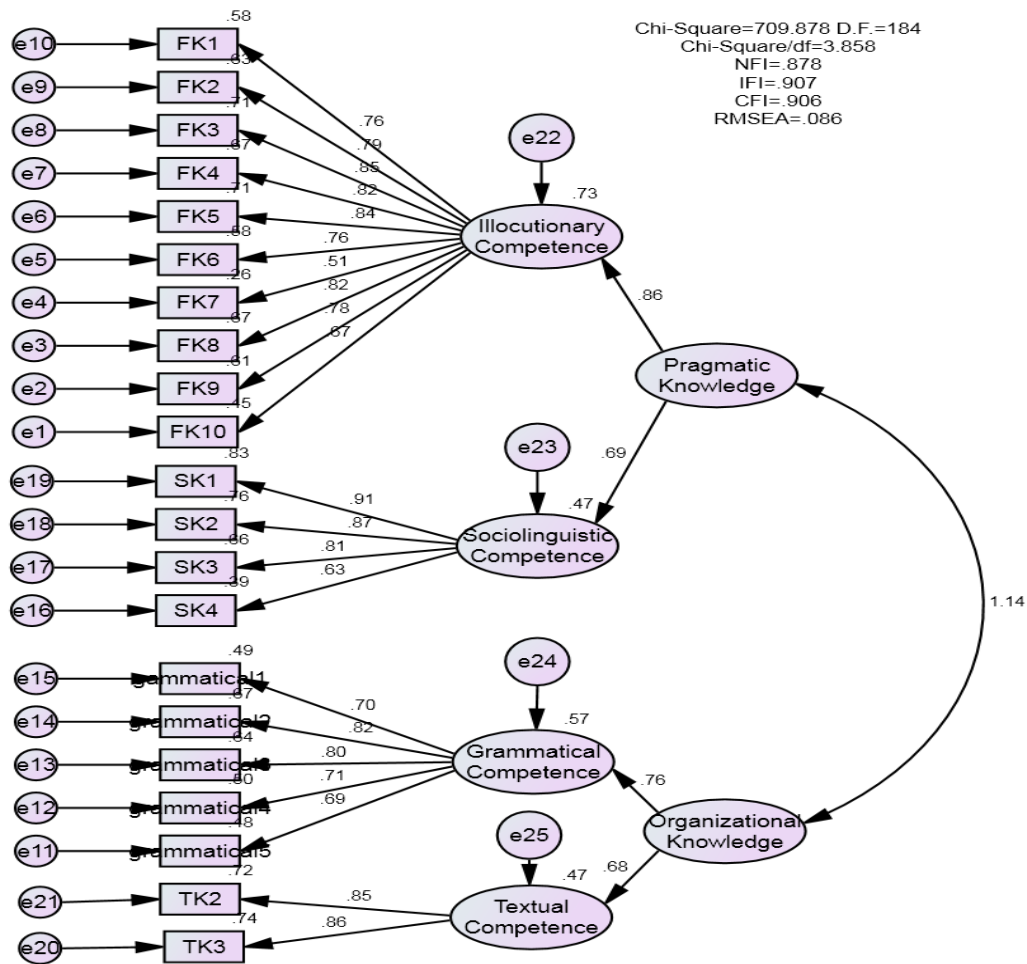


Figure 4.

Structural Equation Model of the Communicative Competence

The estimation of SEM featured that pragmatic knowledge and organizational knowledge should be included in a higher level of latent concept as the correlation coefficient was high, which could be the variable of Language Competence as proposed by Bachman (1990). In terms of one's pragmatic knowledge, participants would believe that hospitality and tourism students' illocutionary competence in English was more important than sociolinguistic competence as the standardized coefficients were .86 and .69 respectively. This result indicated that English teachers of H & T programmes as well as professionals of these two industries thought that for prospective professionals of these two industries, illocutionary competence seemed to be more important than sociolinguistic competence. Possible explanation would be that for new employees of H & T industries, having knowledge on the cultural reference of English is important but one's ability to really understand the message that guests are trying to express deserves learner's more attention to develop. Once they are promoted to management level, they need to sharpen their social skills with guests with various cultural backgrounds or nationalities, sociolinguistic competence will be critical for them to build up the connections with their clients.

For the organizational knowledge, standardized coefficient of grammatical competence is slightly greater than textual competence (.76 and .68 respectively) and therefore, grammatical competence is deemed to be more vital for the novices to start their career in H & T industry. For the entry-level employees, using English grammatically is one of the basic qualifications expected by their supervisors; on the other hand, textual competence may not be that important to them at this stage because the chances for them to write a business document or have a long conversation with foreign guests are low. Such demand may be in need when they are promoted to a higher level. Another potential reason is that the number of question items under the construct of textual competence was only two which may not be able to elicit accurate information. Such a limitation warrants the future research to further explore this issue with more question items under the construct of textual competence.

## 5. Conclusion

The status of English as the international language has been confirmed by previous research and the importance of being fluent in English has been considered as a vital competence for professionals of H & T industries (Hsu, 2011). However, being fluent in a language is an abstract concept and Bachman (1990) proposed a CLA model to systemize what abilities a language learner should acquire to be communicatively competent. Albeit quite a large quantity of academic works have been researched on the application of Bachman's CLA model in assessing one's communicative competence in any language. It is to the author's knowledge that no prior study employing CLA model to identify future H & T professional's communicative competence in English and the present study aims to undertake further exploration on this issue. Three hundred EFL teachers of H & T programmes as well as 90 manager of H & T industries were invited to participate in this research. A self-design scale was developed based on the

framework of Bachman's CL model to feature the communicative abilities that participants expect prospect employees of H & T industries are expected to acquire.

Exploratory factor analysis was applied to extract items for the four constructs and 21 items in total were acquired. Furthermore, in order to appropriately address the proposed research questions, this self-designed questionnaire needed further examinations on its reliability and validity. Cronbach's alpha, composite reliability (CR), average variance extracted (AVE) and confirmatory factor analysis (CFA) were calculated to fulfill this task. Results of such examinations indicated this self-designed scale was good for structural equation modeling.

Results of SEM showed that for language aspect of communicative competence in English for prospective H & T professionals, pragmatic knowledge and organizational knowledge were closely related to each other. For the pragmatic knowledge, illocutionary competence was considered more important to entry-level employees of than the sociolinguistic competence; however, it did not imply that sociolinguistic competence was not important. In terms of organizational knowledge, grammatical competence seemed to be greatly recommended by English teachers as well as managers of H & T industries to future employees of these two industries to develop. However, there were only two items for the construct of textual competence which might affect the results of SEM analysis.

## 6. Reference:

- Bachman, L. F. (2000). Modern language testing at the turn of the century: Assuring that what we count counts. *Language Testing*, 17(1), 1-42. Doi: 10.1177/026553220001700101
- Bachman, L. F., & Palmer, A. S. (1996). *Language testing in practice*. Oxford: Oxford University Press.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York, NY: Guilford.
- Carroll, J. B. (1961). The nature of data, or how to choose a correlation coefficient. *Psychometrika*, 26, (4), 347-372.
- Chen, Y. Y., & Hsu, S. Y. (2007). An experiment and planning of curriculum for preparing practical competencies of hospitality management students. *Asian Journal of Management and Humanity Sciences*, 2(4), 577-589.
- Conaim, M., & Falvey, P. (2004). Does Student Language Ability Affect the Assessment of Teacher Language Ability? *Journal of Personnel Evaluation in Education*, 16 (4), 269-285.
- Douglas, D. (2000). *Assessing Languages for Specific Purposes*. New York: Columbia University Press.
- Eslami-Rasekh, Z. (2005). Raising the pragmatic awareness of language learners. *ELT Journal*, 59(3), 199-208. doi: 10.1093/elt/cci039.
- Hsu, L. W. (2011). Modelling factors that influence Taiwanese students' English communicative competence. *International Journal of Current research*, 2(1), 129-141.

- Knowles, M. S. (1970). *The modern practice of adult education: a systematic approach to education*. NY: Holt, Rinehart, & Winston.
- Kriegl, U. (2000). International hospitality management: Identifying important skills and effective training. *Cornett Hotel and Restaurant Administration Quarterly*, 41, 64-71. doi: 10.1177/001088040004100218
- Lado, R. (1961). *Language Testing*. New York: Mc Graw-Hill.
- Littlemore, J., & Low, G. (2006). Metaphoric competence, second language learning, and communicative language ability. *Applied Linguistic*, 27, (2), 268-294.
- McNamara, T. (1996). *Measuring second language performance*. New York: Longman.
- Johanson, M., Ghiselli, R., Shea, L. J., & Roberts, C. (2010). Revealing key competencies of hospitality graduates demanded by industry: A 25-year review. *International CHRIE Conference-Refereed Track*. Paper 5. [http://scholarworks.umass.edu/refereed/CHRIE\\_2010/Saturday/5](http://scholarworks.umass.edu/refereed/CHRIE_2010/Saturday/5)
- Millar, M., Mao, Z., & Moreo, P. (2008). Hospitality management educators vs. the industry: A competency assessment. *Hospitality Management*. Paper 6. <http://repository.usfca.edu/hosp/6>
- McNamara, T. (1990). Item response theory and the validation of an ESP test for health professionals, *Language Testing*, 7(1), 52-76.
- Phakiti, A. (2008). Construct validation of Bachman and Palmer's (1996) strategic competence model over time in EFL reading tests. *Language Testing*, 25(2), 237-272. doi: 10.1177/0265532207086783
- Purpura, J. (2004). *Assessing Grammar*. Cambridge: Cambridge University Press.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational research*, 99(6), 323-338. doi: 10.3200/JOER.99.6.323-338
- Verhoeven, L., & Vermeer, A. (2002). Communicative competence and personality dimensions in first and second language learner. *Applied Psycholinguistics*, 23(3), 361-374. doi: 10.1017/S014271640200303X
- Zhang, K. (2006). *Language Assessment Theory and Research of Mandarin Chinese Assessment*. Beijing: Commercial Press.

## Appendix

### Illocutionary competence

1. I always know how to expression my thoughts in English accurately.
2. I can always get the answers I need when I ask questions in English.
3. I think I have a good command while communicating in English.
4. I am fluent when communicating in English.
5. I am familiar with the strategies to communicate with foreigners in English.
6. I will try to use the new expressions in English even when I am not completely sure the

correct use of it.

7. I will use different ways of expressions when communicating with people with various backgrounds.
8. I can control the flow of communication quite well.
9. I love to interact with people with different backgrounds.
10. When communicating with people with various backgrounds, I will figure out a way to communicate even some communicative barriers emerge.

#### Sociolinguistic Competence

1. I am sensitive to different dialects of English.
2. I am sensitive to different uses of English.
3. I am familiar with the uses of native speakers of English.
4. I can tell interlocutor's cultural background according to his/her speech and/or gesture.

#### Grammatical Competence

1. I have no (or limited) problem to select appropriate vocabulary when communicating with foreigners.
2. I know how to analyze a vocabulary based on its root, prefix and suffix when encountering some new words that I do not know.
3. I can identify the syntactical function of each word in a sentence such as subject, verb, noun and adjective.
4. I know the pronunciation skills of English.
5. I do not make grammatical errors a lot when I write in English.

#### Textual Competence

1. I can substitute a word with another one with limited difficulty.
2. I always know a logic expression to communicate with foreigners.