

The English Oral Communication Competency of Thai Engineering Students

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Abstract- In the present days, English communication becomes the international mass connection between people and organizations. The crucial barriers of the English communication would be low level of competency especially for non-native speakers. Developing language profiles of graduates for higher levels of speaking skills to serve the need of workplace in Asian Economic Communities becomes a high concern in many countries including Thailand as one of the providing strategies for ASEAN association. This study investigated and identified levels of English oral communication competency of civil engineering students at a Thai university of Technology with the proposing designed instrument based on the ESP theory aiming to search for specific points for further development. The informants were assessed with tasks composed of structured interviews with pictures to draw out the linguistic features in specific work context using the constructed rubrics. Finding revealed that the participants were ranged at the average level and their significant English oral competency deficiencies fall on grammatical errors and pronunciation and the use of L1 to communicate. However, the interaction aspect indicated that the students are able to interact and communicate in the specific work context if they have the technical content schema. To estimate the proposing tools, results revealed that the first set of the instrument used for signifying levels of English competency of the informants and the second set with scoring process and rubric evaluation to assess the students' English performance noted in the first set appeared the reliability. Data from this research is used for implications and recommendations for developing the quality of Thai engineers.

Index Terms- English oral communication competency, civil engineering work context, performance assessment

I. INTRODUCTION

English has been accepted as an international language used throughout the world for various reasons, including academic and professional purposes. Today's job market reinforces the importance of communication competency in English for new graduates. It is valued as one of the requirements which generally appear in many job advertisements. Stakeholders in education realize this fact and try to develop their educational outputs aiming for providing graduates who are competent in English communication to serve the requirement of global workplaces (Nguyen, 1998; Keane and Gibson, 1999; Reimer, 2002; Patil, 2005)

In engineering sectors, English communication has important roles into almost all aspects of the profession: from

marketing to manufacturing, and quality assurance to post-sale maintenance (Nickerson, 1998; Grin, 2001; Reimer, 2002). In spite of realizing its importance, English oral communication has been the crucial problems for non-native speakers especially for Thai engineering students. Shyness and typical characters are factors which significantly affected to the competence of English communication as well as other factors such as language environment, psychological barriers, vocabulary, and listening problems (Corella, 2000; Wang, 2004; Kim, 2006). In order to develop the language competency of the learners, the focused analysis of the specific language use and the language ability of the learners in the target context are needed. This research aimed to identify levels of English oral communication competency and to propose the right tools constructed on the theory of ESP performance assessment to measure this competency of civil engineering students at Rajamangala University of Technology, Tawan-Ok, Uthentawai Campus, Bangkok, Thailand. The data emerged from the study was discussed for implications and recommendations for developing the quality of Thai engineering graduates according to the stages in the ESP process (Dudley-Evans and St. John, 1998).

II. THE PURPOSES OF THE STUDY

The study has two objectives:

1. To identify levels of English oral communication competency of civil engineering students at Rajamangala University of Technology, Tawan-Ok, Uthentawai Campus, Bangkok, Thailand using the proposed instruments.
2. To create the right tools to measure the English Oral Communication Competency of Thai civil engineering students

III. LITERATURE REVIEW

One of the essential elements of communication skills is language competency (Miller & Gaitens, 1996; Corella, 2000). According to the various definitions of oral communication competency defined by researchers (Wieman and Buckland, 1980; Duran, 1983; Bygate, 1991), they refer the competency as 'an individual's ability to form abstract sentences that are produced and adapted to circumstances at the moment of speaking, by making rapid decisions and contributions that adequately fit the given situation'. Competency can be measured according to the levels of established standards (Fletcher, 1991; Parry, 1996). The definitions are in accordance with the concept of communicative competence proposed by Hyme (1992) that "Any use of language involves the attribute of communication. What the use of language are in specific groups, what purposes

people have for language, ...the perspective of communicative competence is intended to help answer the fundamental justification for introduction of the notion of communication into models of grammar”

As English has been cited as the major language of global business, communication competency in English is always referred to as an important requirement for graduates to enter the workplace.

To assess the civil engineering students’ performance in English oral communication, the language of ESP is considered to be the target language performance. The language in ESP refers to the whole range of language resources and the language produced. It should be adequate for the job and not necessarily be at a native speaker level, but it should employ communicative strategies and be effective in communicating with non-native professional users of English (Munby, 1978; Hutchinson and Waters, 1987; Robinson, 1980; Douglas, 2000). What really matters in ESP assessment is whether learners can communicate in a specific target language and use knowledge of the field in order to achieve their aims, in order to understand and be understood, and in order to get their message across in English (Douglas, 2000 as cited in Tratnik, 2008).

Characteristics of ESP performance assessment (Brown, 2004) are considered to frame the instrument design to measure the expected outcome. Task specifications and task content (Brown, 2004; Tratnik, 2008) are constructed from previous need analysis (Kaewpet, 2009), existing standards of English for Engineering Occupations developed by The English Language Development Center, or ELDC, (2005) and comments and perceptions of experts in the field. The theme of language use in this performance assessment constructed from the sourced mentioned is under the context of “Safety in a construction workplace”

In term of speaking assessment criteria, some existing types of proficiency assessment in The American Council on the teaching of Foreign Languages (ACTFL, 1999) and The Common European of Reference for Languages (CEFR, 2011) are considered to design the appropriate level identification process. Linguistic, textual, functional, sociolinguistic and strategic competences are types of language knowledge that specialists involved in assessing speaking competencies (Quellmalz, 1991; Bachman & Palmer, 1996; Luoma, 2004; Tratnik, 2008) mentioned that they should be components to be measured in the English oral communication competency performance of the learners.

IV. METHODOLOGY

The informants for this research were the interviewed 20 final year’s students of civil engineering, Faculty of Engineering and Architecture, Rajamangala University of Technology, Uthentawai campus, Bangkok as the target group to draw out their profiles of English oral communication competency for further development.

This study started from reviewing literatures to create tools for the language performance measuring. The safety issue in a construction workplace was set as the theme to define task specifications, task content, scoring and estimating for the English oral communication competency assessment. Task

specifications rely on demands of the linguistic characteristics of specialists working in the construction areas which could reflect of target group’s language used. Two sets of instrument were designed following the research objectives to define the right tools. Then, the reliability and validity of tools were examined and verified by specialists in the fields. The content of the first tool was also determined in their validity by testing with the pilot student’s opinion. The instrument was developed before administering to the informants to consider the characteristics of language input which could draw out the language performance outcome. After that, their performances were collected and analyzed for each expected task as their language profiles.

V. RESULTS

Identifying the target language profiles based on specific tasks

The participants were identified for levels of their English oral communication competency according to the eight specific tasks given as follow:

Giving personal information

Half of the informants were identified, according to the instrument, at acceptable scale (Table 1) in using appropriate syntax to perform the task. Only two persons were assessed at poor scale while seven persons were put at the good one. The significant errors found in this task were using verb ‘be’ and ‘other verbs’ together, missing verb to be (is, am and are) and describing jobs without articles. Other errors frequently appeared were tenses, subject verb agreement, articles and using incorrect pronouns.

Describing instruction signs in a construction site and identifying words for personal protective equipment

Fourteen students were rated at acceptable scale for their performances in describing instruction signs. Two participants were identified at good one while four of them were unable to communicate in English with appropriate structures expected in the task, respectively (Table 1). Structures mostly used in this task are *You must+ wear/use+ PPE, Infinitive (Wear/Use+ PPE), You should+ verb1 (wear, use) + vocab.* Meanwhile, the significant errors found were broken words and phrases without any verbs to communicate intelligibly.

Six participants were rated at good scale in identifying words of personal protective equipment while twelve students performed at acceptable one following by two students at poor scale. Problems in English communication found from the lacking knowledge of word used in specific context of personal protective equipment.

Explaining warning signs and using vocabulary explaining warning signs for safety in a construction site

Results from this task revealed that only one student was at good scale while thirteen participants were rated at acceptable one with two participants at poor scale (Table 1), respectively. Syntax errors often found in this task were missing of verb to do, omission of verb after do not, miss verb and use wrong tenses

including words causing the problem for English communication in the warning signs such as scaffold, sandals and climb.

Using phrases/ sentences to explain the circumstances of accidents

Only one person performed at good scale, ten students were measured at acceptable rank and nine students were at poor one, respectively (Table 1). Significant errors appeared in the forms of the absence of basic sentence structures, subject+verb agreement, using wrong tenses and incorrect uses of articles.

Using phrases/ sentences to explain causes of accidents

Two students performed at good scale, twelve were grouped at acceptable one and six participants failed to communicate in English language as expected goal stated in the task, respectively.

Making suggestion to prevent the accident in a construction site

Ten of civil engineering students performed at good scale while six participants were identified at acceptable one. There were four students who failed to use English communication to convey their idea.

Lacking of ability to comprehend the question especially the word 'prevent', the use of modal verb (should) without infinite verb are the significant errors found in this task.

Levels of English oral communication competency

According to table 2, levels of English oral communication competency of the target group were identified ranging from novice (N), to intermediate (I) and advance (A) with slightly differences shown with the mark of plus(+) and minus(-) depending on their competency in the areas as follow:

Pronunciation competency: results showed the numbers of 4N-, 12N and 2N+ students identified in this competency category. Interestingly, only two students were in intermediate level. Problems found in this subject are the omission of final sounds either in the consonant ending or ending 's' for plural, mispronunciation of /l/ and /r/, giving wrong pronunciation from misspelling and placing accents on wrong syllables.

Aspect of vocabulary: levels of this competency were identified, according to the established rubrics, from novice to intermediate. Participants were ranged with 2N- , 4N and 4N+. Other ten students were ranged with 2I- , 3I and 5I+, respectively. For vocabulary section, lacking of vocabulary knowledge is the significant problem found in this target, even though, the informants could perform very well in identifying personal protective equipment and safety sign tasks but they failed to choose correct words to describe the accidents in construction sites. Besides, participants were unable to produce the language suitably to the context given in the interview.

Fluency of English oral communication competency: levels of this competency of the participants fell to novice and intermediate with numbers of 2N-, 7N and 4N+ students, respectively. For intermediate levels, there were 1I-, 7I and 1I+ students, respectively. Difficulties of fluency areas mostly found in forms of speech rate, long pauses and silence Fragment, broken words and refusing to speak English often occurred during this performance assessment.

Aspect of interaction competency: this task revealed interesting results that participants have various interaction competencies as shown in the numbers of different levels. The identification ranged from the numbers of students in novice to advance levels beginning with 2N, 1I- , 13I , 3I+ and 1A, respectively. The informants showed effort trying to express their ideas, understanding and schema knowledge to interact the interviewer. Even though they have limitation of their language resource, they responded with their strategic competence to maintain the conversation. Using their native language, Thai, to clarify the tasks was mostly found as the strategy in their English oral communication.

Coherence: levels of all participants are classified into numbers of 1N-, 1N, 2I-, 15I and 1I+, respectively. Most of connectors they used in this conversation are 'and', 'but', 'then', 'so' and 'because'. Actions of the awkwardness and repetition of ideas appeared as coherent competency of some participants in the study.

VI. TIME COMPLETION

Time used by the participants to complete the 8 tasks given varied from 3.00-8.02 minutes. Overall time completion could signify into 5 different framed: 4.00-4, 30, 4.31-5.00, 5.01-5.30, 5.31-6.00 and 6.01 up to 7 minutes (Table 2).

Table 1 Summary of Individual assessment on Their English oral communication competency in a civil construction context (safety issue).

Performance Evaluation Analyses	Participant No. (N=20)																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
- Giving personal information (Structure)	A	A	A	P	A	A	G	A	A	A	G	P	A	G	G	A	A	G	G	G
- Pronunciation	N	N	N+	N	N	N	I	N	N	N-	N-	N	N	N	N	N	N+	I	N	N+
- Vocabulary	N	N	I	I+	I-	I-	I+	N	I	N-	I+	N+	N	N	N	N+	N+	I	N	N+
- Fluency	N	N	I	I	I	N	N+	N	I	N-	I	N	N+	N	N	I	N+	N+	N	I
- Interaction	I	A	I	I	I-	I-	I	I	I	N	I+	N	I	I	I	I	I	I	I+	I+
- Coherence	I	I	I	I	I-	I	I	I	I	N+	I+	N	I	I	I	I	I	I	I+	I
- Describing instruction signs on a construction site	A	A	A	A	A	A	A	A	G	P	A	A	A	A	P	P	A	A	P	G
- Identifying words for personal protective equipment	A	P	G	A	A	A	G	P	G	A	G	A	A	A	A	A	G	A	A	G
- Pronunciation	N	N	N+	N	N	N	I	N	N	N	N-	N	N	N	N	N	N+	I	N	N+
- Vocabulary	N	N	I	I+	I-	I+	I	N	I	N	I+	N+	N	N	N	N+	N+	I	I+	I+
- Fluency	N	N	I	I+	I	N	N+	N	I	N	I	N	N+	N	N	I	N+	N+	N	I
- Interaction	I	A	I	I	I-	I+	I	I-	I	N	I+	N	I	I	I	I	I	I	I+	I+

Table 1 (Continued).

Performance Evaluation Analyses	Participant No. (N=20)																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
- Explaining warning signs used on a concentration site	A	P	A	A	A	A	A	A	G	P	A	P	P	A	P	A	A	A	P	A
- Using vocabulary explaining warning signs for safety on a construction site	A	P	G	A	A	A	G	P	A	A	A	A	A	A	P	A	A	A	A	G
- Pronunciation	N	N	I	N	N	N	I	N	N	N-	N-	N	N	N	N	N	N+	I	N	N+
- Vocabulary	N	N	I	I+	I-	I-	I	N	I	N-	I+	N+	N	N	N	N	N+	I	I	I+
- Fluency	N	N	I	I	I-	I	I	N	I	N-	I	N	N	N	N	I	N+	N+	N	I
- Interaction	I	A	I	I	I-	I	I	I	I	N+	I+	N	I	I	I	I	I	I	I+	I+
- Coherence	I	I	I	I	I-	I	I	I	I	N	I+	N	I	I	I	I	I	I	I+	I
- Using phrases/ sentences to explain the circumstances of an accident	P	P	A	G	A	A	A	P	A	P	A	P	A	P	A	P	A	P	P	A
- Pronunciation	N	N	I	N	N	N	I	N	I	N	N	N	N	N	N+	N	N+	I	N	N+
- Vocabulary	N	N	I	I+	I-	I	I+	N	I	N	I+	N	N	N	N+	N	N+	I	N	I+
- Fluency	N	N	I	I	I-	N	N+	N	I	N	I+	N	N	N	I	N	N+	N+	N	I
- Interaction	I	N	I	I	I-	I	I	I	I	N	I+	N	I	N	I	N	I	I	I+	I+
- Coherence	I	N	I	I	I-	I	I	I	I	N	I+	N	I	N	I	N	I	I	N	I

Table 1 (Continued).

Performance Evaluation Analyses	Participant No. (N=20)																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
- Using phrases/ sentences to explain the cause of an accident	A	P	A	G	A	G	A	A	A	P	A	P	A	A	P	A	P	P	A	A
- Pronunciation	N	N	N+	I	N	N	I	N	N	N	N	N	N	N+	N	N	N+	I	N	N+
- Vocabulary	N	N	I	I	I	N	I+	N	I	N	I+	N	N	N+	N	N+	N+	I	I+	I+
- Fluency	N	N	I	I	I	N	N+	N	I	N	I	N	N	I	N	I	N+	N+	N	I
- Interaction	I	A	I	I	I	I	I	I	I	N	I+	N	I	I	I	I	I	I	I+	I+
- Coherence	I	I	I	I	I	I	I	I	I	N	I+	N	I	I	I	I	I	I	I+	I
- Making suggestion to prevent the accident on a construction site	A	A	G	G	A	G	G	P	G	P	G	P	A	G	A	G	P	G	G	A
- Pronunciation	N	N	N+	N	N	N	I	N	N	N	N-	N	N	N	N	N	N	I	N	N+
- Vocabulary	N	N	I	I	I-	I-	I	N	I	N	I+	N	N	N	N	N	N	I	N	I+
- Fluency	N	N+	I	I	I	N	I	N	I	N	I	N	N	I	N	I	N	N+	N	I
- Interaction	I	A	I	I	I	I-	I	I	I	N	I+	N	I	I	I	I	I	I	I+	I+
- Coherence	I	I	I	I	I	I	I	I	I	N	I+	N	I	I	I	I	I	I	N	I
Performance Score (%)	80.5	71.8	89.2	87.0	82.7	87.0	89.2	74.0	91.3	71.8	89.2	69.7	80.5	82.7	76.2	78.3	80.5	82.7	80.5	91.3

Table 2 Summary of Individual assessment on Their English oral communication competency in a civil construction context (safety issue).

English Oral Communication Competency of Thai engineering students (in Safety Issue)								
Participant No.	Performance Evaluation Structures/ 8 tasks	Performance Score	Levels of competency(N : I: A: S)					Time of Completion
			Pronunciation	Vocab.	Fluency	Interaction	Coherence	
P.1	7 A /1 P	15/24= 80.5%	N	N	N	I	I	04.32 min
P.2	3A/5 P	11/24=71.8%	N	N	N	A	I	04.03 min
P.3	3 G/5 A	19/24=89.2%	N	I	I	I	I	03.00 min
P.4	3 G/4 A/1 P	18/24=87.0%	N	I+	I+	I	I	05.26 min.
P.5	8 A	16/24=82.7%	N	I-	I	I-	I-	04.15 min.
P.6	2 G/6 A	18/24=87.0%	N	I-	N	I	I	04.15 min.
P.7	3 G/5 A	19/24=89.2%	I	I+	N+	I	I	05.14 min.
P.8	4 A/4 P	12/24=74.0%	N-	N	N	I	I	06.05 min.
P.9	4 G/4 A	20/24=91.3%	N	I	I-	I	I-	05.23 min
P.10	3 A/5 P	11/24=71.8%	N-	N-	N-	N	N+	04.43 min.
P.11	3 G/5 A	19/24=89.2%	N-	I+	I	I+	I+	04.18 min.
P.12	2 A/6 P	10/24=69.7%	N	N+	N	N	N	05.12 min
P.13	7 A/1 P	15/24=80.5%	N	N	N+	I	I	04.13 min.
P.14	2 G/4 A/2 P	16/24=82.7%	N	N-	N-	I	I	04.32 min.
P.15	1 G/3 A /4 P	13/24=76.2%	N	N+	N	I	I	05.59 min.
P.16	1 G/4 A/2 P	14/24=78.3%	N-	N+	I	I	I	04.15 min.
P.17	1 G/5 A2 P	15/24=80.5%	N+	N+	N+	I	I	04.20 min.
P.18	2 G/ 4 A/2 P	16/24=82.7%	I	I	N+	I	I	05.03 min
P.19	2 G/3 A/3 P	15/24=80.5%	N	I+	N	I+	I	05.55 min.
P.20	4 G/4 A	20/24=91.3%	N+	I+	I	I+	I	08.02 min

G: Good, A: Acceptable, P: Poor, N: Novice, I: Intermediate, A: Advance

After administered the instruments to participants, their performances in each task were recorded and assessed for their communication competency. Results revealed that individual participant could inform their personal information to serve the purpose of the task and could produce the language outcome as expected results. Before scoring the information, transcribing was done to obtain precise data. The research instrument which consists of pictures of safety context also suits the first objective as it can reflect the informants' competency to their English speech. On the administering steps, results found that most of the participants understood the target tasks and were able to communicate with clear language but their competency varied according to the rubrics proposed in the scoring interpretation process (Good, Acceptable, Poor). This could be confirmed that

the instrument is appropriate to measure the language competency in the specific target. The findings also revealed that the utterances of the informants did not go along with the expected words in the checklist of each task, leading to much effort in transcribing steps to get enough details for interpreting. Moreover, the findings also signified that clear established rubrics and descriptors could reflect the English oral communication competency of the target group and could be more reliable than assessing only numbers of expected words or structures in the checklist. The specific language of safety used in this assessment is considered 'right' for the objective as it could distinguish the competency of individual student to produce the expected language performance. The hardest part of this study is in the transcribing process due to its complexity of

speech characteristics which lead to the difficult work of identifying levels of the informants' language profiles.

VII. DISCUSSION

English oral communication competency of the Thai civil engineering students in this research was studied with the proposed tools aiming to assess their ability in the specific language components. By the first instrument, students were ranged at the average level of competency demonstrated from their performance but in the real workplace, their English oral communication competency are stated at average to low quality as similar to other countries in ASEAN (Yin, 1988; Gordon, 2002; Orsi and Orsi, 2002; Riemer, 2002; Cowling, 2007; Yasin *et al.*, 2010). Significant errors mostly found as grammatical errors when giving personal information and describing situations of accidents showed the lack of knowledge of basic structures in English. But, with the pictures of specific context like safety equipment and signs used in the construction workplace, students showed an acceptable level of communication with the application of their schema knowledge even though they made errors in structures and lack of vocabulary in some specific tasks. This finding demonstrated that pictures representing vocabulary needed in the field of their workplace with the target language could be important stimulus for English oral competency improvement. Tratnik (2008) has mentioned that special lexical, semantic and syntactic characteristics of technical language with communicative function enable people in a professional field to convey the meaning more specifically. Therefore, the teaching of English for specific purposes should be good enough for developing communicative strategies for non-native speakers. Considering on the details of this finding, in term of pronunciation the participants made mistakes frequently are the omission of the final sounds and giving wrong pronunciation which may come from different language systems. Teaching the system of English pronunciation to provide the ground knowledge for pronouncing correct vocabulary and pointing out the differences of pronunciation in Thai and English language systems can help develop the students' oral competency though it may take long time to reach the goal.

The second finding showed the appropriateness of the tool to measure the English oral language communication competency of the target group. Results indicated that students appeared to perform adequate performances to be assessed as expected tasks given in the instrument. Moreover, data obtained from the informants can answer the required language components with the 'task specifications' and 'task content' constructed on the criteria of ESP. performance assessment (Bachman and palmer, 1996; Douglas, 2000) With the scoring steps, the tools in the second set of the instrument are considered to be appropriate for this evaluation based on criteria of scoring performance (ACTFL, 1999, Brown, 2004, CEFR, 2011) as it provides the rating scale rubric to evaluate explicit aspects of the participants' language competency and the descriptor rubric for raters to work on addressing levels consistently.

VIII. CONCLUSION

The English oral communication competency of the Thai engineering students was identified ranging from Novice to Intermediate levels with the established instrument proposing to justify its appropriateness. The study showed the satisfied results as the first tool included task specifications and task content to draw out specific information to be measured while the second set of the instrument involving scoring process can provide rating systematically. The language profiles obtained from the study are valuable sources for improving the quality of Thai learners.

IX. IMPLICATIONS AND RECOMMENDATION

The findings from the assessment showed low levels of English oral communication competencies of the RMUTTO final year civil engineering students. This implies defects in the stages of ESP process in the institute. To develop the English oral competency of the students, there should be a revision of all factors related to the teaching and learning. For example, there should be more research on the need of workplace, revising English courses taught in the faculty including implementing new courses focusing on English oral communication with the competency-based teaching approach (Auerbach, 1986) and competency-based assessment (Brown, 2004).

Researching on developing standard assessment of English oral competency is recommended, similarly to the development of rating systems for teachers to produce the instrument which could signify the competencies of the assessed students. Factors affecting errors found in each task are interesting research topics to be further investigation. In addition, problems obtained from the results could be employed for upgrading the quality of Thai learners depending on their lacking in the market requirement. Issues of differences in cultures, language structures, articulation and other differences between English and Asian languages (Thai, in particular) that may cause problems of oral communication competency in English of Thai engineering students are recommended for further studies. Conducting research on comparing levels of English Oral Communication Competency of Thai civil engineering students with civil engineering students in other countries, ASEAN and ASEAN + 3, in particular, are also recommended. Learning from each other can be a way to stimulate and prepare Thai students to be ready to improve their competencies in order to be quality members of the ASEAN community in the near future.

ACKNOWLEDGEMENT

The author would like to express her gratitude to the faculty of Engineering and Architecture, Rajamangala University of Technology, Tawan-Ok (RMUTTO) for the funding of this research.

REFERENCES

- [1] ACTFL. 1999. The ACTFL Proficiency Guidelines - Speaking (Revised 1999). Yonkers, NY: American Council on the Teaching of Foreign Languages.

- [2] Auerbach, E.R. (1986). Competency-based ESL: one step forward or two step back? **TESOL Quarterly**, 20 (3), 411-429
- [3] Bachman, L. F. & Palmer, A. S. (1982). The construct validation of some components of communicative proficiency. **TESOL Quarterly**, 16, 449-465.
- [4] Brown, H. D. 2004. *Language Assessment: Principles and Classroom Practice*. White Plains, N.Y.: Pearson Education, Inc.
- [5] Bygates (1991). Theoretical perspectives on speaking : Annual Review of Applied linguistics,
- [6] Corella, L. 2000. *Communication and the Engineering Profession : A field study*. U.K.: College of Communication.
- [7] Council of Europe (CEFR). 2011. *Common Europe Framework of Reference for Languages : Learning, teaching, assessment*. Cambridge University Press/ Council of Europe.
- [8] Cowling, J. D. 2007. Needs analysis: Planning a syllabus for a series of intensive workplace courses at a leading Japanese company. **English for Specific Purposes**.26: 426-429
- [9] Douglas, D. (2000). **Assessing language for specific purposes**. Cambridge: Cambridge University Press.
- [10] Dudley-Evans T. & St. John, M.J (1998) **Developments in English for specific purposes**. Cambridge : Cambridge University Press. p.210
- [11] Duran, R.L. (1983). Communicative adaptability: A measure of social communicative competence. *Communication Quarterly*,31,320-326.
- [12] English Language Development Center (ELDC). (2005).**Standards of English for Occupations**. Bangkok.
- [13] Fletcher, S. (1991). *National Council for Vocational Qualifications: Standards and Competence*. London: Kogan Page.
- [14] Gordon, J. 2002. An ESP program for entry-level manufacturing workers. In T. Orr (Ed.), *English for specific purposes: case studies in TESOL practice series*. pp. 147-160. Virginia: TESOL Inc.
- [15] Grin, F. 2001. English as economic value: facts and fallacies. **World Englishes**. 20(1): 165-178.
- [16] Hymes. D. (1992). The Concept of Communicative competence revisited. In **Thirty Years of Linguistics Evolution: Studies in Honour of Rene' Driven**. (pp.31-54). John Benjamins Publishing Company,
- [17] Kaewpet, C. (2009). Communication Needs of Civil Engineering Students. **English for Specific Purposes**. 28 (4): 266-278.
- [18] Keane, A. and Gibson, 1999. Communication Trends in engineering firms: implications for undergraduate engineering course. *International Journal of Engineering Education*. 15(2): 115-121.
- [19] Kim, S. 2006. Academic oral communication needs of East Asian international graduate Students in non-science and non-engineering fields. **English for Specific Purposes**, 25: 479-489.
- [20] Luoma, S.. (2004). **Assessing Speaking**. United Kingdom: Cambridge University Press.
- [21] Miller, C.R., J. Larsen and J. Gaitens, (1996) *Communication in the Workplace: What Can NCSU Students Expect*. Center for Communication in Science, Technology and Management Publication, UK.
- [22] Munby, J. (1978). **Communicative Syllabus Design**. London: Cambridge University Press.
- [23] Nguyen, D. Q. 1998. The essential skills and attributes of an engineer: A comparative study academics, industry personnel and engineering students. **Global Journal of Engineering Education**. 2 (1): 65-75.
- [24] Nickerson, C. (1998). Corporate culture and the use of written English within British subsidiaries in the Netherlands. **English for Specific Purposes**. 17(3): 281-294.
- [25] Orsi, L. and Orsi, P. 2002. An ESP program for brewers. In T. Orr (Ed.). **English for Specific Purposes : case studies in TESOL practice series**. (pp.175-188), Verginia : TESOL. Inc.
- [26] Parry, S.R. (1996). " The Quest for Competencies.". **Training Magazine**,33(7), 48-54
- [27] Patil, A. S. 2005. Global' engineering criteria for the development of engineering profession. **World Trans. Eng. Technol. Educ**. 4 : 49-52.
- [28] Quellmalz, (1991). Developing criteria for performance assessments: The missing link. **Applied Measurement in Education**, 4(4).319-331.
- [29] [29] Riemer, M.J. 2002. English and Communication Skills for the Global Engineer. **Global Journal of Engineering Education**. 6 (1): 91-100.
- [30] Robinson, P. (1980). **ESP: The current position**. Oxford, Pergamon.
- [31] Tratnik, A. 2008. Key Issues in Testing English for Specific Purposes. **Scripta Manent**, 4(1): 3-13
- [32] Wang, B. R. 2004. An investigation of ESP instruction in Tongji University. **Foreign Language World**. 1: 35-42.
- [33] Wieman, J. M., & Backlund. P.M.(1980). Current theory and research in communicative competence. *Review of Educational Research*, 50, 185-199.
- [34] Yasin, A., W. Shaupil, A. Mukhtar, N. Ghani and F. Rashid. 2010. The English proficiency of Civil Engineering students at a Malaysian polytechnic. **Asian Social Science**. 6 (6): 161-170.
- [35] Yin, K. M. 1988. ESP for engineers: a reassessment. **ESL Journal**. 42(2): 102-108.

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