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Issues in the Assessment of English Oral Proficiency for Civil Aviation Personnel in Korea*

Dongil Shin (Chung-Ang University)**
Oryang Kwon (Seoul National University)

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The purpose of this paper is to explore ESP (English for Specific Purposes) issues required the development and administration of an oral proficiency test for Korean aviation personnel. The paper presents fundamental considerations for the test development, suggestions for the task construction and rating, as well as the problems inherent to ESP tests. It suggests appropriate test types and formats that conform to the guidelines of the International Civil Aviation Organization (ICAO). The construct to be measured in aviation-specific proficiency tests is discussed from the meaningfulness of aviation phraseology. The paper proposes the establishment of a cooperative system among testing specialists, applied linguists, aviation personnel, government representatives, and other major stake holders.

I. INTRODUCTION

The International Civil Aviation Organization (ICAO) recently announced a plan to assess the English proficiency of aviation personnel throughout the world in an effort to enhance the aviation safety by reducing accidents¹ caused by communication breakdown or miscommunication between the pilots and air-traffic controllers (ICAO, 2004). At the 168th meeting of the ICAO on March 5, 2003, it was resolved that an assessment system of aviation personnel's English language competence be introduced by March 5, 2008, which will require a minimum proficiency level of 4 (Operational Level) for pilots and air traffic

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**The first author is Dongil Shin and the second author is Oryang Kwon.

¹ For example, language problem is believed to be a contributing factor in the following accidents: 583 dead in a collision on the runway in Spain in 1977; 73 dead in a plane clash at JFK in 1990; 164 dead in a plane crash into a mountain in Colombia in 1995; 312 dead in a mid-air collision in India in 1996.

controllers of international flights. The new policy requires a speaking test to be administrated in order to assess the listening and speaking abilities in the six criteria of pronunciation, structure, vocabulary, fluency, comprehension, and interaction. The ICAO also suggests that each country develop and administer its own test that will satisfy the ICAO requirements.

The phraseology used in international aviation has been settled in the profession although it is yet to be more widely agreed upon and learned among the aviation personnel around the world. The ICAO believes that the aviation personnel have to use plain English beyond the phraseology situations. For example, at the pilot's request for clarification to the controller's instruction to turn left, the controller is expected to elaborate as follows: "I want you to turn left abeam the shopping small at your one o'clock. Do you have it in sight?" (Mell, 2004).

Although ESP (English for Specific Purposes) is now firmly established as an important area in English language teaching and research, research on ESP assessment is still in its budding stage. Douglas (2000) is probably the first one who discussed comprehensively the issues in assessing ESP. There are not many tests in actual professions or areas. For example, Canadian English Language Benchmark Assessment for Nurses (CELBAN) claims that it is the only and the first English language assessment designed specifically for internationally educated nurses (Centre for Canadian Language Benchmarks, 2005). The Test of Legal English Skills (TOLES) is another fairly new test of ESP (Global Legal English, 2005). Assessing aviation English is a new territory to explore; in Korea, it is a never explored area of research and implementation.

This paper is based on two project reports (Dongil Shin & Oryang Kwon, 2005a, 2005b), carried out for the Korea Civil Aviation Safety Authority and the Korea Traffic Safety Authority. The first project was intended (1) to decide which speaking test format (semi-direct vs. direct) to use in the aviation-specific English test of speaking, and (2) to develop an evaluation framework for the test development and administration.² The second project proposed a blueprint for testing English for Civil Aviation Purposes (ECAP). The report estimated resources and personnel organization necessary for developing an ECAP test.

This paper discusses ESP issues required for the development and administration of an oral proficiency test for Korean aviation personnel. It will suggest the test types and formats which will conform to the guidelines of the ICAO. It will also propose the establishment of a cooperative system among testing specialists, applied linguists, aviation personnel, government representatives, and other major stake holders. It will present

² The framework for developing and selecting aviation-specific English tests was suggested as a practical guide in the project. Major checklist categories are in Appendix B.

fundamental ideas for the task construction and ratings, and some problems inherent in the tests of Korean aviation personnel.

II. SCALES OF THE ICAO ENGLISH PROFICIENCY

The ICAO Requirements for Proficiency in Language Used for Radio Telephony Communications define proficient speakers as follows:

2.1 Proficient speakers shall:

- a) communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
- b) communicate on common, concrete and work-related topics with accuracy and clarity;
- c) use appropriate communicative strategies to exchange messages and to recognize and resolve misunderstandings (e.g., to check, confirm, or clarify information) in a general or work-related context;
- d) handle successfully and with relative ease the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar; and
- e) use a dialect or accent which is intelligible to the aeronautical community.

The ICAO Language Proficiency Rating Scales were provided to six components of communicative abilities. These components and levels are described below briefly. Detailed descriptions of the scales are available in two project reports carried out through Korea Civil Aviation Safety Authority and Korea Traffic Safety Authority (Dongil Shin & Oryang Kwon, 2005a, 2005b; ICAO, 2004).

1. The Components

The ICAO scale is given for each of the six components: pronunciation, structure, vocabulary, fluency, comprehension, and interaction.

1) Pronunciation

The pronunciation component “assumes a dialect and/or accent intelligible to aeronautical community.” It covers pronunciation, stress, rhythm and intonation.

2) Structure

The structure component assumes that “relevant grammatical structures and sentence patterns are determined by language functions appropriate to the task.”

3) Vocabulary

The vocabulary component covers the word range and accuracy. It also assesses the idiomatic expressions, different nuances, and sensitivity to registers.

4) Fluency

The fluency component covers the relative ease of flow of speech, variation of speech flow for stylistic effect, and spontaneous use of appropriate discourse markers and connectors.

5) Comprehension

The comprehension component addresses the accuracy of comprehension in linguistic and cultural subtleties.

6) Interaction

The interaction component covers the easiness of interaction in different situations, the sensitivity to verbal and non-verbal clues, and appropriate responses to them.

2. The Levels

The scales set six levels in for each of the six components. The levels' range is from Level 1 (lowest) to 6 (highest).

Level 6: Expert

Level 5: Extended

Level 4: Operational

Level 3: Pre-operational

Level 2: Elementary

Level 1: Pre-elementary

The English proficiency scale of the ICAO defines Level 1, the Pre-elementary Level, as the lowest level. At this level, it is impossible to communicate in English. Level 6, the Expert Level, is the highest level. The “Fluency” category of Level 6 specifies the level as: “Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g., to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.”

The most critical level is Level 4, the Operational Level, as the ICAO demands that aviation personnel have the proficiency of Level 4 or above. The descriptions of Level 4 for each component are as follows³:

Pronunciation: Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.

Structure: Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.

Vocabulary: Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.

Fluency: Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.

Comprehension: Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.

Interaction: Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.

³ See Dongil Shin and Oryang Kwon (2005a), ICAO (2004) for descriptions of each level for the six categories.

III. ISSUES IN ASSESSING THE ENGLISH ORAL PROFICIENCY OF AVIATION PERSONNEL IN KOREA

1. Construct of the Test

A test to assess the English proficiency of aviation personnel will measure the language abilities required for successful performance in the aeronautical community. The questions are what the aviation-specific language ability is and what is to be assessed. The ICAO Standards and Recommended Practices (SARPs) specify that the ICAO language proficiency requirements accomplish, among other things, the followings:

- a) they strengthen the provisions for the use of the language to be used in radiotelephony communications, both the language of the station on the ground and, in airspace where it is required, English from the level of Recommendations to Standards;
- b) establish minimum skill level requirements for language proficiency for flight crews and air traffic controllers;
- c) introduce an ICAO language proficiency rating scale applicable to both native and non-native speakers;
- d) clarify the requirement for the use of both plain language and phraseologies;
- e) standardize on the use of ICAO phraseologies;
- f) recommend a testing schedule to demonstrate language proficiency;
- g) provide for service provider oversight of personnel compliance.

The SARPs also require that ICAO phraseologies be used whenever possible. The language requirements apply both native and non-native speakers. The pilots and air traffic controllers are required to demonstrate Level 4 in both ICAO phraseology and plain language by 2008. Those who pass Level 4 will be required to take an aviation specific test in every three years, while the personnel who pass Level 5 should take the test in every six years. The one who reaches Level 6 will be exempted from taking any further test.

2. Types of Measures

The speaking test for the pilots and air traffic controllers should reflect the different areas/kinds of work that they are engaged in. Thus there need to be different tests for the pilots and the air traffic controllers. Besides there should also be different tests for the trainees of pilots and of air controllers. Therefore, there need to be four different types of test forms.

The test needs to be small enough for the test to be easily administered and managed, yet big enough to accurately measure the communicative abilities of the aviation personnel. If a new test is being developed, it may well have the first half tasks common to all four types of test forms, in addition to the second half tasks for different areas and purposes. The common tasks can be assessed through phraseologies, while the field-specific tasks of narration or problem-solving would be rated with help from general English specialists.

3. Plain English vs. Telephony Phraseologies

As in the assessment of all other ESP (Abraham & Plakans, 1988; Brown, 1995; Elder, 2001; Institute of Air Navigation Service, 1994; Wu & Stansfield, 2001), one of the key issues in developing a test for aviation personnel is the integration of plain English and telephony English in a single test form. Pilots and air traffic controllers are usually familiar with the phraseologies of telephony communication necessary for aviation, navigation and controlling.

The issue is the question about what the plain English is, and how much the plain English will be included in a test. The plain English in the aviation personnel test does not have to be the same kind of English as used in, for example, market places or social gatherings. The plain English in this test had better reflect the job description of the aviation personnel in their ordinary working situations.

The general framework of the test, therefore, would have the test items that include various situations that the pilots and air traffic controllers would encounter in their workplaces. It is necessary for the test to include at least one or two items for routine telephony communication in everyday situations, one or two items for unfamiliar situations, and one or two items for emergency situations. In Appendix 3, sample dialogues (Gang-hee Lee, 2000) are provided in everyday work and urgent situations.

4. Test Method

Bachman (1990) sees the test method facet as an important contributor to the variation of test performance. There are many ways of assessing the candidates' speaking abilities. The most direct and well-known method of speaking test is the face-to-face interview method. However, this method has a limitation of practicality in terms of human resources and test-taking time.

We propose that the speaking test for aviation personnel in Korea use a semi-direct format, a voice-recording method in which the candidates respond to the directions and tasks given by the computer monitor (or test booklet), and that their responses be taped for later rating. The reasons for a computer-based test are obvious: (1) the computer monitor

can provide audio-visual input to enhance the realism of the situations; (2) the computer can easily store and retrieve the data of the candidates' performance for rating and reviewing; (3) the computer-based input can be less face-threatening than live face-to-face interviews and thus improve the performance; and (4) the raters can rate the performances at their most convenient time.

5. Test Tasks

The tasks for the speaking test should be such that they can effectively measure the six components specified by the ICAO and that they can properly incorporate the specific work situations of pilots and air traffic controllers. It is suggested that each of the four types of tests, i.e., tests for pilots, air traffic controllers, pilot trainees and controller trainees, have at least six tasks, and that the time period for the test should not exceed thirty minutes.

There are a couple of considerations to be born in mind when designing test tasks. First, the tasks should be made within the framework of the ICAO guidelines. Second, the tasks should not be too predictable or unpredictable. The test should not contain too many identical tasks across administrations; however, the test should not contain drastically different tasks across administrations.

All the tasks in the test will be designed for the aeronautical contexts that will assess the abilities of plain English and ICAO telephony phraseologies. The first part of the test needs to have easier tasks, such as communicating in general telephony phraseologies, then the second half of the test can require use of aviation plain English, with such communicative functions as summarizing or describing the information given in pictures or texts, narrating or explaining to solve a problem, and persuading.

The aviation personnel test needs to identify the functions of the pilot-controller interactions, the scope of their interactions, essential vocabulary, and linguistic characteristics of their work, and categorize them into major and subordinate categories. In designing the tasks, the ICAO guidelines should be honored, and the development of the test requires the cooperation of testing specialists and aviation personnel.

Speaking task construction requires considering the followings: (1) test rubric in general, (2) time to prepare a response, (3) use of target language prompt, and (4) kinds of illustrations.

6. Test Designers, Item Writers and Reviewers

For a test of English for specific purposes, such as this test for aviation personnel, it is imperative to identify and classify the types of work that the test aims to address in it. Specification of qualifications is recommended for test developers including item writers

and reviewers in a test guideline.

Two types of qualifications are required to become the writers of test guidelines and the test items: knowledge about the actual work situations and knowledge about language testing. Since it is virtually impossible to expect one person to have knowledge about both fields, it is recommended that the professionals in one field be educated in the other field.

Two possible solutions are suggested. First, aeronautic specialists become test writers. To guarantee the knowledge of the telephony communication, the pilots and air traffic controllers should have years of experience. Their lack of knowledge in English language testing should be supplemented through workshops in the field of English language testing. Second, testing specialists become test writers. Testing specialists who lack knowledge about aviation are required to receive aviation English education, including experiential learning.

Even with such trainings, it is still strongly advised that the two groups of specialists cooperate in the test development team in order to enhance the validity of the test.

The qualifications for test reviewers should be the same as those for test writers, whether they are aviation professionals or testing professionals. Both groups need education in the other field, and they need to cooperate in reviewing work.

7. Rating

Rating requires concentration of attention to the performance and guidelines for rating; intuitive rating jeopardizes inter-rater and intra-rater reliabilities. The oral proficiency test for aviation personnel should follow the ICAO scale, which ranges from Level 1 (Pre-elementary) to Level 6 (Expert).

Rating should be based on given criteria and guidelines. Raters should base their judgment exclusively only on the ICAO scale descriptions and item guidelines, avoiding personal biases as much as possible. The rater should not compare a candidate's performance with other candidates' performances, but compare the performance against the given rating criteria. We suggest that a speaking sample be rated holistically first, and analytically next, based on the holistic rating result. Also, the six components of the speaking skill should be equally rated. In rating a speaking performance, raters often weigh certain components, such as structure (grammar), more than other components. Raters should also be cautioned that memorized phrases or expressions often give false impressions so that the performance is rated higher than its actual level.

It should be remembered that the ICAO scale descriptions serve as the minimum requirements for each level. When the candidate's performance is rated, the initial grade can be one of the six levels specified by the ICAO, without a consideration about "high" or "low." For example, if the speaking samples of a candidate demonstrate the characteristics

of Level 4, the candidate will be initially rated Level 4. If many of these samples demonstrate the characteristics of Level 5, but if there are still some samples that fit Level 4, the final grade for this candidate will be High Level 4. If only a few or none of the samples demonstrate the characteristics of Level 5, then the final grade will be Low Level 4. In other words, none of the speaking samples should demonstrate the characteristics of Level 3 if the candidate's grade is in Level 4.

8. Rater and Rater Training

Qualified raters are an essential part in assessing the oral proficiency of the aviation personnel. Continued rater training is also indispensable to ensure the validity and reliability of the rating over time.

The ICAO regulation requires that the rater be a person whose English speaking ability is at Level 6 (Expert) or above and who has sufficient knowledge and experience in aviation and telephony communication. The regulation, however, does not limit the rater's language background; both native and non-native speakers of English can become raters provided that they satisfy the above qualifications.

If an aviation specialist is to be a rater, we suggest that the person has minimum five years of experience in the aviation profession. However, if the qualification requires only the aviation personnel to be raters, there is a practical problem of the scarcity of such qualified people in Korea. Besides, entrusting the rating work only to a small number of raters can have a detrimental effect on the reliability, efficiency, and practicality of the test.

Therefore, a person who has the above-Expert English proficiency and who has the experience of rating other speaking tests could serve as a rater, after proper education in aviation and telephony communication. We propose such a person have more than three years of experience in English education and receive minimum fifty hours of education in aviation and telephony communication.

The first step to become a rater is receiving an intensive training. The training can be implemented in two consecutive days, or in several days with homework assignments during the interval time periods. The rater should become conversant with the information about testing guidelines and rating procedures. A person having the experience of rating other tests should be "reprogrammed" with the new rating habit and criteria necessary for this test, which the intensive training program should be able to provide.

After the intensive training program, successful prospective raters will go through a rating practicum program. Speaking samples should be rated during the practicum. The prospective raters' rating tendencies need to be investigated through measurement programs such as the FACETS Program. Successful rater candidates who accurately and consistently rate the samples will receive a certificate. A second or third chance will be

given to those who fail in the first or second trial of the rating practicum, as there are individual differences in the time for obtaining new skills. No discriminatory treatment should be given to the second or third round accomplishers.

Rater training does not end with the completion of a rating practicum; regular retraining programs should provide the raters with opportunities to update changes in the test and to reflect on their rating. To this end, the raters' records of rating should be maintained to see their consistency over time and the inter-rater reliabilities. Consistent raters can be rewarded with their status change, such as becoming a senior rater of a team or a supervisor. Inconsistent raters can be revoked of their certificates, or can be subjected to the initial intensive training program again. Regular retraining should be given every six months and/or before a large scale test, through self-teaching with guidelines or through a short-term training session under a trainer. An internet on-line education could also serve the purpose.

VI. CONCLUSION AND SUGGESTIONS

The present paper has discussed issues related to the development and administration of an oral proficiency test for aviation personnel that will become effective in the year 2008. The paper presented fundamental considerations for the test development, suggestions for the task construction and ratings, and problems inherent in ESP tests.

Aeronautic communicative contexts require pilots and air traffic controllers to interact through the medium of phraseology. There are unfamiliar or emergent times, however, when plain English is needed because the limited phraseology cannot effectively suffice for situation description, sequence narration, decision making, or problem solving English. The problem is, here in Korea who can assess aviation personnel's English proficiency levels in the critical areas of highly specialized phraseology. Resource allocation will require a great deal of money and effort.

A test of speaking proficiency for aviation personnel is a high-stakes test, and it could incur serious law suits and many ensuing social and organizational problems if it is not properly developed and administered. Therefore, developing and administering an oral proficiency test for this purpose should be carried out with many stake-holders and specialists cooperating closely with one another. We suggest that a consortium be established, involving all the related institutes and academics, in order to develop and administer a test that all the stake-holders, especially the pilots and air traffic controllers, will accept as a valid and reliable test.

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APPENDIX A
ICAO Language Proficiency Rating Scale

LEVEL	PRONUNCIATION ASSUMES A DIALECT AND/OR ACCENT INTELLIGIBLE TO THE AERONAUTICAL COMMUNITY	STRUCTURE RELEVANT GRAMMATICAL STRUCTURES AND SENTENCE PATTERNS ARE DETERMINED BY LANGUAGE FUNCTIONS APPROPRIATE TO THE TASK	VOCABULARY	FLUENCY	COMPREHENSION	INTERACTIONS
EXPERT 6	Pronunciations, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with understanding.	Both basic and complex grammatical structures and sentence patterns are consistently well controlled.	Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.	Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.	Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.	Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues, and responds to them appropriately.
EXTENDED 5	Pronunciations, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with understanding.	Basic grammatical Structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.	Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.	Able to speak at length with relative ease on familiar topics, but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.	Comprehension is accurate on common, concrete, and work related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of event. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.	Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship effectively.
OPERATIONAL LEVEL 4	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation, but only sometimes interfere with understanding.	Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur. Particularly in unusual or unexpected circumstances, but rarely interfere with meaning.	Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.	Produces stretches of languages at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.	Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.	Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparently misunderstanding by checking, confirming or clarifying.
PRE-OPERATIONAL 3	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation, and frequently interfere with understanding.	Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.	Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work related topics but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Produces stretches of language, but paraphrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Comprehension is often accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events.	Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.
ELEMENTARY 2	Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation, and usually interfere with understanding.	Shows only limited control of a few simple memorized grammatical structures and sentence patterns.	Limited vocabulary range consisting only of isolated words and memorized phrases.	Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words.	Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.	Response time is slow, and often inappropriate. Interaction is limited to simple routine exchange.
PRE-ELEMENTARY 1	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.

Note. The Operational Level (Level 4) is the minimum required proficiency level for radiotelephony communication. Levels 1 through 3 describe Pre-elementary, Elementary, and Pre-operational levels of language proficiency respectively, all of which describe a level of below the ICAO language proficiency requirement. Level 5 and 6 describe Extended and Expert levels, at level of proficiency more advanced than the minimum required Standard. As a whole, the scale will serve as benchmarks for training and testing, in assisting candidates to attain the ICAO Operational Level (Level 4).

APPENDIX B

Major Checklist Categories as Practical Guideline for Aviation-specific Test Development and Evaluation

Does the aviation test to be evaluated or developed...

- (1) construct narrowly focused aviation language?
- (2) meet test criteria from the ICAO scale?
- (3) elaborate the ICAO scale descriptors (especially of level 3 and 4)?
- (4) adjust test task difficulties into the ICAO scale (especially in level 3 and 4)?
- (5) develop test items, with the help from aviation informants and testing specialists?
- (6) review the developed items in a systematic way?
- (7) document all the specifications of item construction and review?
- (8) use a database for test materials and participants?
- (9) keep the test administration secure?
- (10) follow a systematic rating process?
- (11) relate item construction to rating?
- (12) monitor raters' reliability?
- (13) develop and sustain rater training program?
- (14) report test results and manage test-takers' appeal appropriately?
- (15) keep all the data safe and validate the test?

APPENDIX C

Pilots-Air Traffic Controllers Dialogues in Everyday and Urgent Situations

P: Pilot A: Air traffic controller

(everyday situation: takeoff)

P: Seoul Ground Control, Cessna one two three four Bravo at South ramp, taxi for takeoff.

A: Cessna three four Bravo, Seoul Ground, taxi to runway 18, wind two two zero at one zero, altimeter three zero two zero.

(Urgent Situation: Engine backfiring)

P: Mayday Mayday, Mayday. Cessna one two three four Bravo, calling any station.

A: Cessna three four Bravo, this is New York Center.

P: My engine is backfiring and I think it is going to quit.

A: Are you transponder equipped?

P: Negative, I'm a Cessna 182 slant X-ray.

A: What your position?

P: I'm not sure. but somewhat between Montpelier VOR and Keene VOR at six thousand five hundred.

A: Cessna three four Bravo for radar identification turn right heading 090 degree.

P: Unable, I would fly into cloud and I'm not IFR rated.

A: Can you turn left heading 180 degrees.

P: Affirmative.

A: Roger, turn left heading 180 degree and report steady on that heading.

P: Three four Bravo, steady 180 degrees.

A: Three four Bravo roger, turn right heading 270 degrees.

P: Three four Bravo, right two seven zero.

A: Cessna three four Bravo, how many souls on board?

P: Nine.

A: Roger, three four Bravo, radar contact, position twenty five miles north of Albany airport, say your intention.

P: I'd like a vector to Albany airport

A: Three four Bravo roger, fly heading 195 for Albany, Albany weather VFR, wind 290 at 10, altimeter 3001, advise when you have the airport in sight at twelve o'clock, now six miles.

P: Three four Bravo, airport in sight.

A: Three four Bravo, contact the tower 118.2, they know of your situation.

P: Three four Bravo, thanks, good day.

A: Three four Bravo, good day.

Applicable levels: general, adults

Key words: English for specific purposes, ESP, aviation English, speaking test, oral proficiency test, pilots and air-controllers English, English for aviation personnel, English testing

Dongil Shin, Ph.D
Department of English
Chung-Ang University,
Seoul, 156-756 Korea
Tel: (+82)-10-6733-9961 (Mobile)
FAX: (+82)-2-821-5098
Email: shin@cau.ac.kr

Oryang Kwon, Ph.D
Department of English Education
Seoul National University,
Seoul, 151-748, Korea
Tel. (+82)-17-352-5217 (Mobile)
FAX: (+82)-2-583-7542
Email: oryang@snu.ac.kr

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