



UNDERSTANDING AVIATION ENGLISH AS A LINGUA FRANCA

PERCEPTIONS OF KOREAN AVIATION PERSONNEL

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Researchers exploring the use of language use in radiotelephony communication have tended to focus on the limitations of the non-native English user and the threats which their limited control of English may pose for aviation safety (e.g. Atsushi, 2003, 2004). Hence the recent International Civil Aviation Organization (ICAO) policy places the onus on non-native users to bring their English to an appropriate standard. The present paper argues that there is a need for a broader perspective on this issue and supports this case with reference to two sources of data: a) episodes of radiotelephony discourse recorded in two air traffic control centres in Korea exemplifying non-routine, abnormal and emergency situations involving NS of English and NNS from different language backgrounds, b) focus group and individual interviews with selected Korean aviation personnel eliciting their interpretations of these episodes and of issues in aviation English more generally. Findings suggest that responsibilities for communication problems in aviation English are distributed across NS and NNS users, and may be partly due to the absence of shared assumptions about efficient and appropriate communication practices in an environment where English is a lingua franca (ELF). Implications are drawn for the communication training of all aviation personnel, regardless of language background.

BACKGROUND

In response to the International Civil Aviation Organization (ICAO)'s establishment in 2003 of English language proficiency requirements for aviation personnel, the Korean government moved quickly to develop its own English language test. Two reports on the test development and validation process were commissioned (Shin, Kwon, and Kim,

2005a; Shin, Kwon, and Kim, 2005b) and the task of test development was entrusted to a non-government agency. Although all Korean airline pilots and controllers involved in international flights managed to take and pass the new test before the original enforcement date of March 5, 2008, the vast majority (97%) attained no more than the minimum required level. The minimum level allows aviation personnel to retain their right to work in the international aviation sector, but only for a three year period after which they have to take the test again to validate their qualifications. Only if they attain Expert Level 6 can they be exempt from this reaccreditation requirement.

There was strong opposition to the English language requirement, especially from incumbent Korean airline pilots, who questioned not only the validity of the test but also the whole basis for the ICAO policy. Their objections were based on a view that miscommunication between pilots and air traffic personnel could not be attributed solely to limited English proficiency on the part of non-native speakers of English. They believed that language proficiency was but one of a complex array of factors contributing to problems in radiotelephony communication.

This paper explores the basis for the stance of the Korean aviation personnel by eliciting their feedback on selected instances of communication between air traffic controllers at two Korean control centres and pilots, including both native and non-native speakers of English. These data form part of a larger study evaluating stakeholder perceptions of the impact of the ICAO policy and associated testing regimen in Korea (Kim, in preparation). To assist the reader in understanding the data presented in this paper, we will briefly describe the nature of radiotelephony communication in the aviation sector in the following section.

THE NATURE OF RADIOTELEPHONY COMMUNICATION

Communication between pilots and air traffic controllers takes place through a radio medium with one controller talking to many pilots on the same frequency. English is the default language for such communication in international aviation but the language of the radio station on the ground is also used. Thus in Korea, either Korean or English may be used, depending on who is participating in the communication. There are different dimensions of radiotelephony communication which will be briefly outlined below.

PHRASEOLOGY

Phraseology refers to the standardized words and phrases agreed on for use in radiotelephony communication. Phraseology is meant to cover all routine situations. It is an ex-

ample of a language for specific purposes (LSP), in other words a language that is used in constrained and predictable ways for a limited range of communicative events (Basturkmen and Elder, 2004). While there are different phraseologies in aviation, such as those of the Federal Aviation Administration (FAA) and the European Organisation for the Safety of Air Navigation (Eurocontrol), the ICAO places great emphasis on the importance of using standard ICAO phraseology on the grounds that the use of different phraseologies increases the chance of misunderstanding and hinders optimum communication (ICAO, 2004, pp. 2–3). However, the task of standardising phraseology use is not easy because it means changing habitual language practices. It is also important that, as long as there continues to be variation in the type of phraseology used, controllers are able to understand and respond appropriately. For this reason, a mixed version is taught and used in Korea at present.

Phraseology use differs from phase to phase (i.e. from preparing to take off through to landing and parking at the gate). Pilots are potentially involved in all phases of the communication but they contact an associated air traffic sector only when necessary during their operations. Controllers, on the other hand, while they are concerned only with particular phases - departure and arrival, approach, and midair - engage far more intensively and actively in radiotelephony communication than do pilots. It has been shown that controllers are the ones who usually initiate transmission and present new information (proportion of controller speech acts devoted to initiating, .33; presenting, .56; accepting, .11) whereas pilots are mostly engaged in accepting information (proportion of pilot speech acts devoted to initiating, .06; presenting, .08; accepting, .85) (Morrow et al., 1994, p. 245).

Pilot and controller communication in radiotelephony using phraseology is, according to Mackay and Mountford (1978), a restricted repertoire, that can follow a predictable pattern. Firstly, a speaker initiates a transmission starting with aircraft identification (*call-sign*) and facility identification to get the addressee's attention. Secondly, new information is presented by the speaker. Thirdly, the given new information is confirmed by the addressee by reading back the message (*readback*). Normal routine transmissions are composed of these three components. However, when the message is partially or incorrectly repeated by the addressee, turns are extended to correct the message again by the speaker. This is called *hearback*, which is followed by another *readback* turn. Thus, although some communication involves more complex and extended sequences, the typical *initiation, presenting new information and readback* sequence usually applies.

To make up for any limitations in the phraseology repertoire, many controllers produce phraseology-like expressions that they have invented for use. They also resort to plain English as described below.

PLAIN LANGUAGE (ENGLISH)

Plain language is the language used when phraseology does not suffice in radiotelephony communication between pilots and controllers and, according to the ICAO manual (ICAO, 2004, pp. 3–5), it should be specific, explicit, and direct. The manual clearly states that ‘it in no way should be interpreted as suggesting that plain language can suffice instead of ICAO phraseologies. ICAO phraseologies should always be used in the first instance’ (ICAO, 2004, pp. 2–3). As mentioned earlier, plain language in the context where this study was conducted means either Korean or English.

In the literature on radiotelephony communication in the US setting, it has been shown that when radiotelephony communication deviates from routine phraseology use, plain English is favoured by speakers and addressees in order to make sure that they have understood correctly and have been understood by their interlocutor (Morrow et al, 1994; Howard, 2008). However, these scholars also found, through analysis of an extended corpus of radiotelephony communication, that when a turn contains many units of information or when deviation from phraseology occurs, the communication may become problematic. Any such miscommunication is of course of central interest, given its potential to jeopardize safety.

Although we have some insights into the nature of radiotelephony miscommunication from previous research, thus far few studies have been undertaken in non-English speaking countries such as Korea, where, judging from the test results reported above, the English proficiency of aviation personnel may be only minimally adequate. Furthermore, most studies to date are based on a linguistic analysis, rather than on the interpretations of aviation personnel themselves, who may arguably claim specialist insight in these areas.

RESEARCH QUESTIONS

The research questions explored in the study are as follows:

1. What is the nature of miscommunication in abnormal or emergency situations in the Korean air space, as reflected in samples of radiotelephony discourse?
2. What are the factors contributing to miscommunication in radiotelephony communication, according to Korean aviation experts?

METHODOLOGY

RECORDED DISCOURSE DATA

Data for the study were collected by two different air traffic control centres at the main international airport in Korea: (i) the *Incheon Control Tower*, controlling departures from and arrivals to the Incheon airport and (ii) the *Area Control Centre*, controlling airplanes in midair in Korean airspace and coordinating with adjacent area control centres in Japan or China when necessary. Cases of non-routine, abnormal, or emergency communication were requested by the researchers and chosen by each centre. A total corpus of six episodes, three for each centre, were collected and transcribed but only one episode (case 3, shaded) is discussed in detail in this paper (see Table 1 below). These episodes offer instances of communication in what was classified by the relevant centre as either a non-routine, abnormal or emergency situation¹. They have been selected because we believe they offer evidence that is particularly helpful in understanding the nature of radiotelephony communication and the range of factors which may contribute to misunderstandings in this very unusual and specialised form of interaction.

PARTICIPANTS

Eight aviation experts were recruited to assist with the interpretation and evaluation of the samples of radiotelephony discourse. Five experienced controllers and three experienced pilots, all from Korea, volunteered for this task. Table 2 presents background information about the controller and pilot informants.

Four controllers (Controller 1, 3, 4, and 5) were team leaders at the centre or tower. Controller 1 had four and a half years' experience as an instructor for student controllers and held a Masters degree in Air Transport. Controller 2 had previously worked in the US Air Force for several years. Controller 5 was in charge of a quality assurance team which dealt with standardization of air traffic operations and evaluation of safety. Controller 3, Pilot 1 and Pilot 2 were involved in higher education in the aviation research field, where English was used extensively in reading materials and writing. All three pilots were captains who had started their careers as civil pilots and had experience in both domestic and international flights.

Air traffic sectors	Episode No.	Situations	Level of seriousness	Interlocutors
Area Control Centre	1	Requesting an emergency landing in the nearest airport due to a patient on the airplane	Emergency	NNS-NNS
	2	Requesting diversion to home country due to a technical problem	Abnormal	NNS-NNS
	3	Requesting diversion to an alternative airport due to lack of fuel	Abnormal	NS-NNS
Incheon Control Tower	4	A runway incursion due to miscommunication	Abnormal/ (Emergency)	NNS-NNS
	5	Requesting to be towed from the runway after landing due to hydraulic failure	Abnormal	NS-NNS
	6	Clarifying information for departure clearance	Nonroutine	NS-NNS

Table 1 Collected episodes of radiotelephony communication at each location

PROCEDURES

The recorded discourse segments were firstly transcribed by the researcher (first author). Controller 3, who worked in both control centres, then assisted the researcher with refining the transcription, answering many questions about the details of the phraseology, procedures, contexts and technical terms.

FOCUS GROUPS

The controller informants were issued with copies of the transcripts and listened to them in the context of two focus group discussions with the researcher (one for each control centre) lasting three and a half and four and a half hours respectively. At each of these focus group sessions time was spent completing some of the gaps remaining in the transcripts before commenting on the interaction. Each focus group dealt only with instances of communication from their respective control centres, but Controller 3 participated in both focus groups.

Informants			Years of experience	Length of the interview
Controllers	Area Control Centre	Controller 1	17 years	3 hours and 30 minutes
		Controller 2	17 years	
		Controller 3	21 years	
	Incheon Control Tower			4 hours and 30 minutes
		Controller 5	20 years	
Pilots		Pilot 1 (captain)	13 years	4 hours and 15 minutes
		Pilot 2 (captain)	13 years	3 hours and 45 minutes
		Pilot 3 (captain)	14 years	3 hours

Table 2 Background of the expert informants

ONE-ON-ONE INTERVIEWS

The pilot informants gave their feedback individually in a series of one-on-one sessions with the researcher ranging in length from three hours to four hours and 15 minutes. Since most of the gaps in the discourse had been filled by the controllers, the pilots spent less time listening and relistening to segments of the discourse and focussed mainly on commenting on the episode and how it had been handled by the participants.

Although there were slight differences in procedures for pilots and air traffic controllers, both focus groups and individual interviews shared some common elements. All informants were asked to listen to the discourse carefully and to comment on five aspects:

1. the pilot’s overall professionalism in handling the situation;
2. the controller’s overall professionalism in handling the situation;
3. the appropriateness of both phraseology and plain English use by both interlocutors;
4. the informants’ personal experience of similar situations ; and
5. the informants’ personal recommendations regarding effective communication in similar situations.

All the interviews were carried out in Korean and recorded. Responses were then transcribed, translated into English, and coded.

Due to space constraints, an extract from only one episode (shaded in Table 1 above) has been selected for close analysis in this paper. It was classified as an abnormal situation and involved a native speaker communicating with a non-native speaker of English. The extract reproduced here is accompanied by a brief descriptive commentary by the researcher on salient features, particularly those where miscommunication appears to be occurring. The discourse is shown in the left column, with phraseology sections presented in normal font and the plain English sections italicised. Brief annotations based on Controller 3's explanations are displayed in the right column when this is deemed necessary for the reader to understand the meaning of particular terms. The letter **p** designates pilot and the letter **c** designates controller.

At the end of each segment there is an interpretation and evaluation of the episode, based on feedback provided by the informants. These informants are identified with the codes P (pilot) and C (controller) followed by an ID number (1, 2 and so on).

FINDINGS

THE NATURE OF MISCOMMUNICATION IN RADIOTELEPHONY DISCOURSE

EPISODE 3. ABNORMAL: REQUESTING DIVERSION TO AN ALTERNATIVE AIRPORT DUE TO LACK OF FUEL

In this episode the pilot is an American native speaker of English and the controller is a Korean non-native speaker of English. The issue of concern is diversion to an alternative airport due to fuel shortage. The transmission lasts four minutes and 30 seconds.

Cathay 883 is flying into Hong Kong from Los Angeles. It consumes more fuel than expected due to unexpected weather conditions, and so the pilot requests diversion to Shanghai first and then changes it to Osaka while the airplane is in Korean air space.

(9) **p:** Incheon Control, Cathay 883

(10) **c:** Yes, go ahead

(11) **p:** Roger *sir*, due to *operational requirement we're having to divert and diversion port will be Shanghai. If you could er... liaise with Shanghai ATC and request vector for landing in Shanghai, please*, Cathay 883

(12) **c:** Cathay 883, *copy that*

vectoring is provision of navigational guidance to aircraft in the form of specific headings, based on the use of an air traffic service surveillance system.

In turn 11 the pilot requests a diversion to Shanghai and asks the controller to co-operate with controllers in Shanghai to organize navigational guidance at that location. The controller signals his understanding of the request in turn 12. In the subsequent part of the transmission, the controller asks the reason for the diversion and the pilot lists the related reasons (turn 14). The controller indicates in turn 15 that he has misunderstood both the reason provided and the requested destination. However, when the information is repeated for him by the pilot in turn 16, he signals with the phrase ‘copy that’ (turn 17) that he has understood.

(13) **c:** Cathay 883, *let me know why er... divert to Shanghai airport?*

(14) **p:** Cathay 883, *due to strong head wind, we do not have enough fuel to reach Hong Kong, weather in Taipei is not suitable for landing. Our company would like us to go to Shanghai to refuel, Cathay 883*

(15) **c:** Roger, *due to weather, destination yeah... Hong Kong airport?*

(16) **p:** Negative, *due to strong head wind and not enough fuel to reach Hong Kong, Cathay 883*

(17) **c:** *Okay, copy that*

In the next extract (turn 18), having understood that the diversion airport is Shanghai, the controller asks which Shanghai airport the pilot is intending to divert to. He repeats the same question in turn 20. Meanwhile, the pilot receives a new instruction from his airline to the effect that the destination airport has been changed again. However, the controller fails to pick up that there has been a further change of plan and instead, in turn 22, repeats his request for confirmation of which of the two airports in Shanghai the pilot wants to divert to. In turn 23 the pilot finally understands the controller’s problem and gives the name of the requested airport with the four-letter code, RJBB. The controller then confirms his understanding in the following turn (24).

(18) **c:** Cathay 883, *confirm your destination, Pudong airport or any other airport?*

(19) **p:** Cathay 883, *go ahead*

(20) **c:** Cathay 883, *confirm your destination, Pudong airport or other airport?*

- (21) **p:** Cathay 883, er... *from company we'd like to change plan, we are... now require diversion to Kansai. We need you can organize that we'll turn around and go to Kansai*, Cathay 883
- (22) **c:** Cathay 883, *okay*, confirm er... verify destination Hongqiao or Pudong?
- (23) **p:** Destination now Kansai in Japanese airspace, Kansai, **RJBB**, Cathay 883
- (24) **c:** Confirm destination, Kansai?
- (25) **p:** Affirmative, *sorry we've got to change. It is Kansai*, Cathay 883
- (26) **c:** Roger, *you change* destination, Kansai, standby clearance
- (27) **p:** Standby clearance Kansai, Cathay 883

RJBB is the four-letter code of Kansai airport in Osaka.

In the following exchange, however, another problem with the fix name, navigational position, occurs. In turn 28, the controller gives a direction using one of the fix names, RUGMA, at which point the pilot asks its spelling using plain English 'we need to spell...', and 'how to spell' in turns 29, 31 and 33. This request is not understood by the pilot until turn 34, after the controller has used the ICAO phonetic alphabet to spell out the name. In turn 35 the pilot signals that he has understood the instruction and indicates that he is now proceeding in the direction of the new fix.

- (28) **c:** Cathay 883, cleared to Kansai airport, RJBB airport, and present position direct **RUGMA**, RUGMA, *and then ... er... maintain flight level 360*
- (29) **p:** Cleared to Kansai, present position direct to RUGMA, *We need to spell er... the **waypoint** RUGMA*, Cathay 883
- (30) **c:** Cathay 883, turn left heading, turn left heading 190
- (31) **p:** Left heading 190 and confirm the waypoint RUGMA, *how to spell*, Cathay 883
- (32) **c:** Affirmative, clear direct RUGMA
- (33) **p:** Confirm *the spelling for RUGMA, how to spell*, Cathay 883

RUGMA is the name of a fix. A fix is a navigational position.

Waypoint is another name for a fix.

- (34) **c:** Cathay 883, affirmative, cleared direct RUGMA
er... Romeo Uniform Mike, correction,
Romeo Uniform Golf Mike Alfa
- (35) **p:** Direct RUGMA, Cathay 883, proceeding direct to
RUGMA, maintaining level 360

EXPERT EVALUATION

In their evaluation of this episode the pilot and controller informants stated that the transmission displayed a style of communication typical of native English-speaking aviation personnel. They mentioned the American pilot's verbosity and inappropriate word choice and his use of plain English even when phraseology would have sufficed. P3 put it thus:

for me, like many nonnative speakers of English, I'd prefer listening to simple words rather than long sentences. In this case, I think it would be settled with simple words like 'cancel Shanghai, new alternative Kansai' or 'divert to Kansai'. It will be best if phraseology is used but if one doesn't come up with proper expressions, simplest forms are best, in my opinion.

In the following comment, Informant P2 displays some vehemence in his characterization of the pilot's inefficient use of plain English.

This pilot speaks English very well but he is not the one who does well in air traffic communication. "Request divert to Shanghai" is what he had to say, that's all. And see "Due to operational requirement, blah blah blah..." Does it sound cool if it is said in that way? If the reason is asked, "due to fuel starvation" or "due to fuel" is enough..... They're trying to gain the sympathy of the controller about their diversion or to ask for understanding. What does "due to operational requirement" mean? Why are they afraid of saying their clear intention?

Referring specifically to turn 14, P2 commends the controller for his ability to understand what he believes to be an inappropriate response by the pilot to the question about the reason for the diversion.

Headwind wasn't the reason. The reason was fuel, due to low fuel.
Apart from the matter of whether a person is proficient in English or

not, he has confused cause with effect. I'd say the controller was excellent in understanding. He got the meaning!

Informant P2 added that the pilot's request was problematic in the first place because he did not give the name of the airport, let alone its four-letter code.

Informant P3, on the other hand, put some of the blame for the miscommunication on the controller, who was seen as being too attached to his earlier understanding of the new destination, and hence unable to adjust his understanding even after hearing the pilot's message in turn 22.

Pronunciation issues were mentioned as a source of misunderstanding by more than one informant. Informant P1, for example, commented that the pilot's request for spelling might be because of the typical confusion of the /r/ /l/ sound distinction by Korean speakers of English. He explained that what had probably happened was that the pilot had heard the fix name as 'LUGMA' and hence could not find it on the map.

However, Informant P1 also pointed to the more general problem of under-utilization of phraseology due to the widespread belief that plain English should be the default medium of communication. Informant P2 commented on the pilot's repeated use of plain English use of 'how to spell' instead of 'ICAO phonetic alphabet' or 'phonetic alphabet':

If the pilot had expressed it as 'ICAO phonetic alphabet' rather than 'spelling', the controller could have understood right away, of course. But if I said 'ICAO phonetic alphabet' to American controllers, they wouldn't understand me.

Here it is implied that native speaker pilots are not only loath to use phraseology, but they may not be sufficiently familiar with it to understand when others use it.

DISCUSSION AND RECOMMENDATIONS

The focus of this paper was to identify the nature of miscommunication occurring in a particular radiotelephony transmission between a native speaking pilot and air traffic controller, drawing on a discourse sample recorded at a control centre in Korea that was classified as "abnormal". This episode was selected for closer scrutiny because it epitomized some of the issues emerging in other samples, which, for reasons of space, we are unable to comment on in detail here. It was also selected because it involved a native speaker of English. Native speakers of course have little difficulty in meeting the ICAO requirement because they are already proficient in English.

The miscommunication in this episode related to the pilot's request for diversion to a destination other than the one appearing in the original flight schedule. The request, involving not just one, but two successive changes of destination, was misunderstood by the controller. Although eventually resolved, this misunderstanding resulted in an unnecessarily inefficient and protracted exchange between the parties in question. The episode was not particularly dramatic, but there were potentially serious safety issues at stake. Time is of the essence not only in matters of fuel supply as exemplified above, but also in other situations captured in the corpus. Time was also wasted in Episode 2 where another request for diversion made by a Russian pilot took 12 minutes to resolve and extended over 131 turns. Users of radiotelephony often have multiple tasks to perform and are dealing with situations which may change radically from minute to minute. As might be expected, the main problem in each case appears to be in one party's failure to understand a question, request or explanation, but the source of the problem may vary, according to the aviation experts whose views were canvassed for this study.

The English language proficiency of the Korean controller was never specifically mentioned by the informants, although there was reference to specific features such as pronunciation, deemed to be the source of a number of misunderstandings. As Jenkins (2002, 2005) has proposed, there are core features of pronunciation, including initial consonants, that need to be mastered for mutual intelligibility between English users from different L1 backgrounds. These should be a focus of attention in teaching syllabi tailored to the needs of non-native English speaking aviation personnel, with particular emphasis paid to the sounds which are problematic for particular groups such as the /r/ /l/ sound distinction for Korean and Japanese speakers. Contrastive analyses of the kind conducted by Wang (2007) in relation to Chinese and English speakers of aviation English may provide useful insights for syllabus design.

While limited proficiency is certainly an issue, much of the feedback from informants on this episode and the others in the corpus is focused on communication strategies more broadly and, in particular, the accommodation strategies required for successful interaction between interlocutors of different proficiency. The American pilot, like the other highly proficient English speakers in the corpus, is deemed by our informants to be insensitive to his interlocutor, exceeding the requirements of his role and failing to prioritise in giving information. He is also criticized for verbosity and inappropriate word choice. (A similar accusation was levelled at another native speaker pilot in Episode 3, who stopped on the runway and requested a tug to tow him to the bay due to hydraulic failure but was unable to make himself understood.)

Excessive use of plain English was also identified by the informants as part of the problem. Interestingly, all turns in plain English by this pilot were ultimately replaced with phraseology which suggests that overuse of plain English is not entirely due to the limitations of the existing phraseology repertoire, but at least partly to a view that this is what is needed in abnormal or emergency situations. This finding accords with those of studies conducted in the US radiotelephony context (Morrow et al. 1994; Howard, 2008), where interlocutors are for the most part native speakers of English. These scholars report that when the communication becomes problematic, plain English tends to be favoured by speakers and addressees to make sure that what they have understood and/or are understood correctly. However, this in fact exacerbates the problem because of their tendency to use 'more complex syntax, vague or nonstandard terminology' (Morrow et al., 1994, pp. 253–254). Plain English, in other words, is not very plain at all.

What is clear from these episodes is that communication in the aviation context is a complex matter and that responsibilities for its success (or failure) are shared across participants, regardless of their language background. Communicating effectively in aviation contexts is more than just a matter of using standard phraseology. Other language resources are called upon when the need arises. Since English, plain or otherwise, is generally the language used and since the participants in the exchange are by no means all native speakers, it may be more helpful to think of aviation English as a *lingua franca* than as a restricted specific purpose code. Recent research on the use of English as a *lingua franca* (e.g. Seidlhofer, 2004) reveals that it has a number of characteristics that distinguish it from the native-speaker standard including a disregard for grammatical niceties. More importantly, it is characterised by the frequent use of accommodation strategies to resolve misunderstanding. Successful English as a *lingua franca* communication is, according to the findings of Seidlhofer's analyses, "overtly consensus-oriented, cooperative and mutually supportive" (2004, p. 218).

In spite of the growing research interest on the use of English as a *lingua franca* (ELF) (e.g. Seidlhofer, 2004; Jenkins, 2000, 2007) and the doubts ELF research has cast on the appropriateness of native speaker norms and ownership (Widdowson, 1994), the widespread use of English as the language of aviation has seldom been characterized in ELF terms. Characterizing English as a *lingua franca* in radiotelephony implies that what is critical is not so much mastery of the English language, which has been examined in studies by Atsushi (2003, 2004), but also interactional competence whereby users' responsibilities for communication are shared across participants. These participants, whatever their language background, need to be able to adapt to the situation at hand

and enlist a range of communicative resources to participate in and make sense of messages delivered by speakers with differing levels of English competence in situations which may range from routine to highly unpredictable. The ICAO language testing policy, on the other hand, focuses only on language proficiency, with the implication that the onus rests only on the non-native English speaking pilots and controllers to “lift their game”. The data in the episodes presented here and indeed in the wider corpus from which these episodes were drawn, show that there are many other causes of concern.

A core part of the training of all pilots and controllers, whether native or non-native, should surely involve training in the use of communication strategies to facilitate successful and efficient communication with speakers from diverse language backgrounds. Based on the small sample of evidence presented here, such strategies could include simplification of speech and avoidance of redundant information, paraphrasing of utterances when these are found to cause problems of comprehension, and more judicious deployment of available language resources, including the existing aviation phraseology repertoire. Sullivan and Girginer (2002), writing about the Turkish context, have advocated that teachers of aviation English be engaged in collecting and analysing discourse samples so that they better understand the communicative setting and develop enhanced course materials. We would go further and advocate that discourse analysis and retrospective appraisal of the kind carried out in this study should be used routinely for awareness-raising among all aviation personnel in training.

In addition, there is scope for expansion of ICAO phraseology so that it can cover a broader range of situations and uses. While not all situations are predictable, the similarity of some of the ‘abnormal’ episodes even in our very small corpus indicates that some of them occur repeatedly. As one of our Korean informants puts it:

as a member state we can propose what we need to the ICAO. For example, we need additional phraseology for a particular situation in the taxiway. It happens quite often but there isn’t a proper phrase for it. We need it for more efficient communication and for safety, right?

The latter informant has raised an interesting question regarding the role of non-native English speaking aviation experts, whose voices have hitherto been unheard, in policy-making in the area of radiotelephony communication. Given the rapidly rising numbers of non-native English speakers in the aviation industry, it seems only fair that their perspectives on what matters for radiotelephony communication are taken seriously. This study has taken a small step in this direction.

ENDNOTES

1

A situation is considered non-routine when radiotelephony communication deviates from prescribed procedures (e.g. initiation followed by readback), abnormal when an aircraft has a problem without affecting its normal operation (e.g. lack of fuel, minor hydraulic failure, etc), and an emergency when it involves distress or urgency as defined in the ICAO (1996) Annex 10. Distress is the condition of being threatened by serious and/or imminent danger and of requiring immediate assistance, and urgency a condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance (pp. 5–17).

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