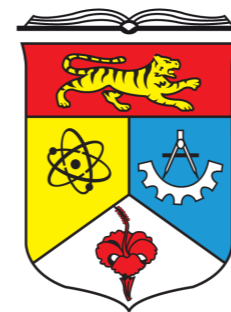


REPAIR STRATEGIES AND ACCOMMODATION THEORY IN PILOT-CONTROLLER COMMUNICATION

HARYANI HAMZAH

ICAEA CONFERENCE 2019
TOKYO, JAPAN
May 8, 2019



UNIVERSITI
KEBANGSAAN
MALAYSIA
*National University
of Malaysia*

OUTLINE

- ▶ Intercultural communication in pilot-controller communication
- ▶ Message errors in pilot-controller communication
- ▶ Repair strategies
- ▶ Communication Accommodation Theory and negotiation strategies
- ▶ Communication strategies for ab-initio pilot and controller
 - ❖ Intercultural Communication Competence module pilot-controller communication
 - ❖ Radiotelephony etiquette

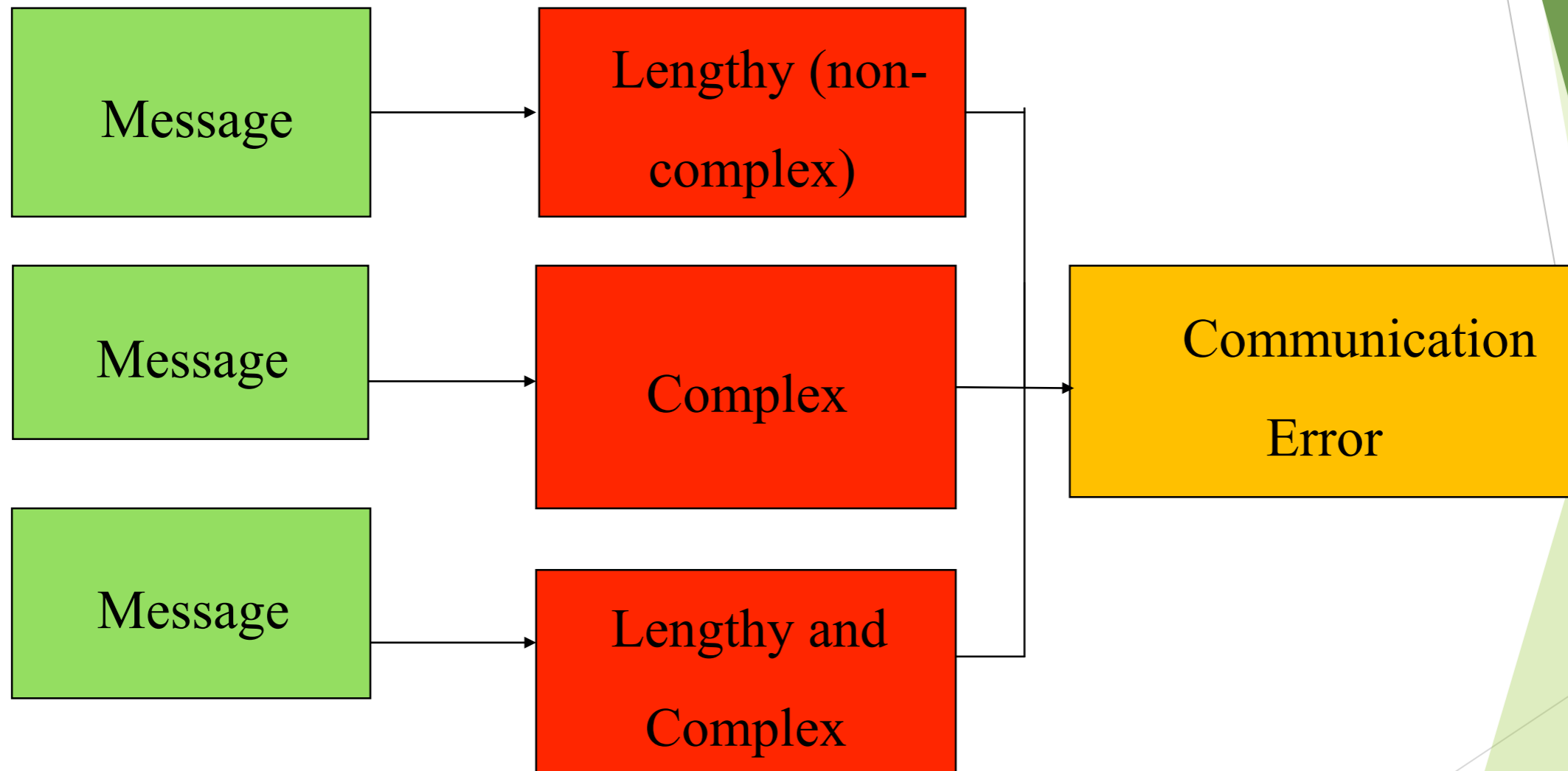
BACKGROUND

- NS and NNS pilots and controllers all over the world participate in communication.
- I have accent, you have accent (within the same country?), variation of Englishes (e.g. pronunciation, intonation)
- English language was learned as second, third or other language.
- The research consist of 30 hours of actual pilot-controller routine communication in Malaysian airspace.
- Data provided by Civil Aviation Authority of Malaysia (*CAAM).

*formerly known as Department of Civil Aviation Malaysia (DCA)

- Explore **routine communication and examine repair strategies** taken by pilots and controllers to resolve miscommunication.
- Acquire new standpoint and **investigate the skills required for pilots and controllers** to resolve communication errors.
- Develop a **suitable aviation English syllabus and training materials** that can improve language competency.

TYPE OF MESSAGE IN PILOT-CONTROLLER COMMUNICATION



CAUSES OF COMMUNICATION ERRORS

- Fundamental lack of English skills
- The use of non-standard phraseology (code switching, complex, lengthy , more aviation topic, plain English)
- Pilots and controllers task factors
- Callsign confusion/ Drop callsign
- Vague, Incomplete, Incorrect instructions/requests
- Non-routine Instructions/requests
- Phraseology language (what to expect)
- Airmen ship/ poor radio discipline

**further reading on miscommunication in pilot-controller interaction*

<http://dx.doi.org/10.17576/3L-2018-2404-15>

TYPES OF REPAIR STRATEGIES

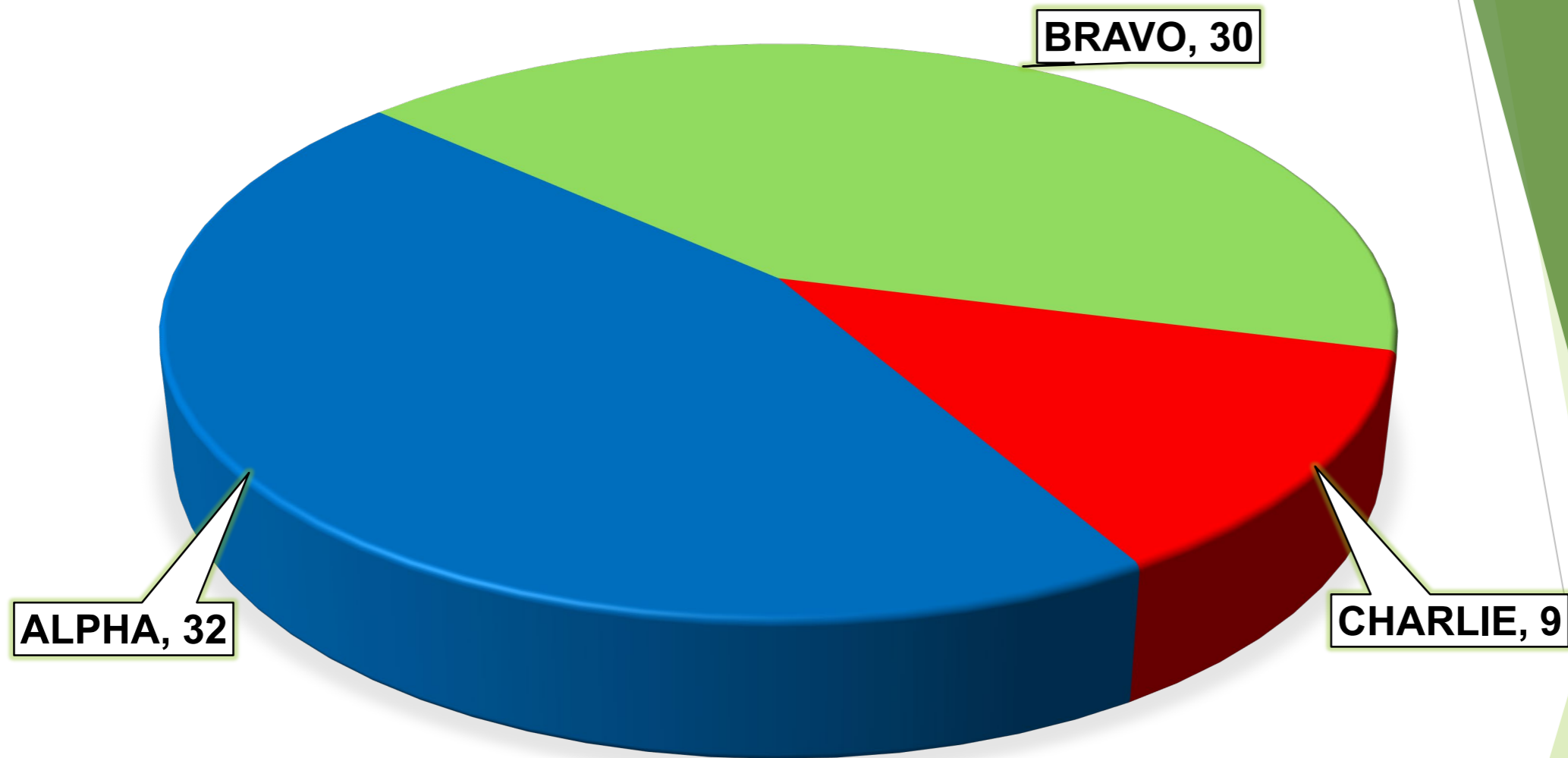
Cho & Lark (2010) ESL

1. Unspecified repair
2. Interrogative repair
3. Partial repeat plus a question word repair
4. Partial repeat repair
5. Understanding check repair
6. Request for repetition repair
7. Request for definition repair
8. Non-verbal resource repair
9. Correction repair

REPAIR STRATEGIES ACCORDING TO TYPES OF REPAIR

Type of repair	Number	%
Unspecified repair	6	8
Interrogatives repair	14	20
Partial repeat plus a question word repair	8	11
Partial repeat repair	4	6
Understanding check repair	7	10
Request for repetition repair	9	12
Request for definition repair	0	0
Correction repair	21	30
Non-verbal resource repair	2	3
Total	71	100

TOTAL REPAIR STRATEGIES BY FREQUENCY



Alpha Frequency	: Approach
Bravo Frequency	: Ground
Charlie Frequency	: Aerodrome

UNSPECIFIED REPAIR

- The controller makes presupposition that leads to misunderstanding in communication.
- Pilot : Rimau 940(.) Quebec 15. ((Confirm))?
- Controller : Rimau 940(.) **you missed your stand Quebec 15(.) is it?**
- Pilot : Negative (.) Quebec 15 right now (.) we are waiting for auto dock to start.
- Controller : Rimau 940 (2.0) stand by
- Pilot : Rimau 940 (.) **docking now**

INTERROGATIVE REPAIR

- The controller uses non-standard phraseology that caused non-understanding for the pilot.
- Pilot : Asian 711(.) request orbit, right hand orbit present position
- Controller : **Are you not trying ?**
- Pilot : **Say again?**
- The pilot initiates repair.

PARTIAL REPEAT PLUS A QUESTION WORD REPAIR

- The pilot has mistaken the waypoint given by the controller.
- Pilot : **Confirm direct to DANDO?** Oriental 394
- Controller : Oriental 394 (.) **negative direct RIGTO**

PARTIAL REPEAT REPAIR

- The pilot's pronunciation was unintelligible to the controller.
- Pilot : Go Jet 2482 (.) **request direct ((INFAR))**
- Controller : Go Jet 2482 (.) **say again direct?**
- Pilot : **Echo Mike Sierra Alpha Romeo**
- Pilot and controller initiate negotiations

UNDERSTANDING CHECK REPAIR

- The controller overlooks the pertinent information in the instruction issued to the pilot.
- Controller : Approve(.) approve
- Pilot : Confirm **approve heading 240 Oriental 705?**
- Controller : Oriental 705(.) affirm(.) approve

REQUEST FOR REPETITION REPAIR

- The controller fails to hear the pilot's request
- Pilot : Flyer 3556 request to maintain heading due weather
- Controller : Flyer 3556 **say again**
- Pilot : Request to maintain heading 290 to avoid weather

NON-VERBAL RESOURCE REPAIR

- The pilot is ready to taxi and requests for taxi instruction but the controller claims the taxi instruction has been issued earlier. The pilot has either failed to copy the instruction or the instruction is never given. However, the problem is resolved without any repair by both parties.
- Controller : Confirm you are not ready for taxi?
- Controller : Rimau 223, are you ready for taxi out?
- Pilot : That is affirmative Rimau 223
- Controller : Rimau 223, taxi holding point runway 33 and taxi clearance has been issued earlier, continue
- Pilot : Via ((zulu)), standard route Rimau 223

CORRECTION REPAIR

- The controller repeatedly requested for the same information from the pilot
- Controller : Rimau 319(.)request your heading to BOBAG?
- Pilot : Present position direct BOBAG confirm?
- Controller : Rimau 319(.)request your heading to BOBAG?
- Pilot : Rimau 319?
- Controller : Your heading to BOBAG sir
- Pilot : I don't understand your question(.) Rimau 319
- Controller : Rimau 319(.) request heading to BOBAG?
- Pilot : Heading 200(.) Rimau 319
- Controller : Rimau 319(.)roger(.)direct to BOBAG
- The controller removed pronoun **“your”** in the sentence

- Repair strategies mostly **done immediately** to avoid any incident.
- Pilot or controller **frequently combine two or more repair strategies** to resolve communication problem.
- Finding suggest that pilots and controllers **adopted accommodations and negotiation strategies**.
- **Definition repair was not recorded**, perhaps due to past experience and standard procedure used in aviation discourse.
- There are **evidence of miscommunication or misunderstanding due to cultural differences and language competency**.

ACCOMMODATION THEORY IN AVIATION DISCOURSE

Communication adjustment (Gasiorek 2016)

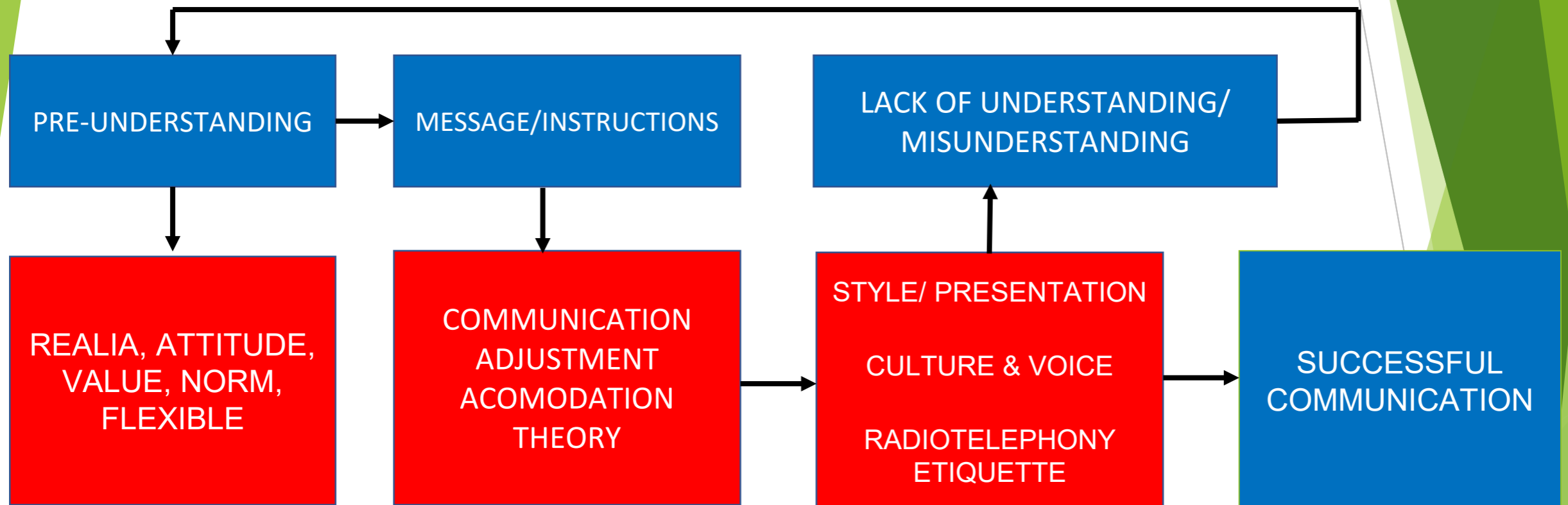
Adjustment can be conscious or unconscious.

- ▶ Different audience- different style & presentation.
- ▶ Recipient design - word selection, sequence and order.
- ▶ Grounding - reach mutual understanding, work together.
- ▶ Mimicking - mirror, imitate Linguistic styles matching. (e.g. prepositions, verbs)
- ▶ Pilots and controllers responsible for constructing an understanding in conversation (signalling, initiate repair immediately).

RECOMMENDATION FOR AB-INITIO PILOT AND CONTROLLER

- Intercultural elements **should be included** in aviation training.
- Aviation training **coupled with language skills** could improve communicative abilities and aviation knowledge.
- **Repair strategies** should be taught in aviation communication.

INTERCULTURAL COMMUNICATION COMPETENCE IN PILOT- CONTROLLER COMMUNICATION

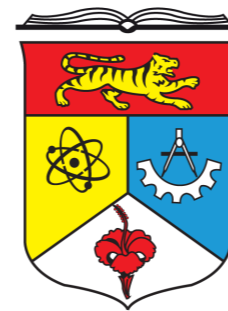


Thank You Terima Kasih

"The weight of responsibility is on 'us' to understand ourselves, rather than on essentialist categories of 'them'.."

(Holiday, Hyde, Kullman, 2010)

HARYANI HAMZAH
yaniamzah@gmail.com
haryani@siswa.ukm.edu.my



UNIVERSITI
KEBANGSAAN
MALAYSIA

National University
of Malaysia