



ICAEA Test Design Guidelines

Session 6

Criterion 1:

Test instruments need to include appropriate tasks that directly assess how test-takers use language in radiotelephony communication contexts.

Criterion 7:

Test instruments need to contain appropriate tasks that assess test-takers' abilities to understand and communicate in real-world contexts.

INTERNATIONAL CIVIL AVIATION ENGLISH ASSOCIATION

supporting the use of English for aviation safety

Why is authenticity important in LPR test design?

Why is authenticity important in LPR test design?

- ✓ Test tasks need to elicit the type of language and how it is used by test-takers in communication settings and contexts associated with their jobs.
- ✓ Test takers are assessed on their language abilities more directly related to real-world communication needs.
- ✓ This means more valid interpretations of test results can be made as indicators of the abilities an LPR test aims to measure.
- ✓ Higher authenticity makes the test instrument more effective.

Criterion 1:

Test instruments need to include appropriate tasks that directly assess how test-takers use language in radiotelephony communication contexts.

Warm up activity

What task types are most suitable for assessing speaking skills in radiotelephony communication contexts?

Rank these from most useful (1) to least useful (6).

- ☐ Describe a picture then answer topically related questions.
- ☐ Listen to a pilot-ATC exchange then summarise the situation.
- ☐ Listen to isolated transmissions and respond/readback the way a controller/pilot would.
- ☐ Answer interview questions about what they would say/do in specific operational situations.
- ☐ Participate in a role-play, communicating with an interlocutor as a pilot/ATCO over the radio.
- ☐ Select the best answer from multiple choice options to complete a written transcript of a pilot-ATCO exchange over the radio.

Discussion

1. Do the tests you are familiar with include radiotelephony tasks?
2. Do the tasks reflect the way test takers communicate over the radio?
3. What does ICAO Doc 9835 say about the role of radiotelephony in the proficiency requirements?

3. What does ICAO Doc 9835 say about the role of radiotelephony in the language proficiency requirements?

3.2.7

The sole object of ICAO language proficiency requirements is aeronautical radiotelephony communications, a specialized subcategory of aviation language corresponding to a limited portion of the language uses of only two aviation professions — controllers and flight crews. It includes ICAO standardized phraseology and the use of plain language.

Appendix 1. Requirements for proficiency in language used for radiotelephony communications

2. Holistic descriptors

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.

Activity 1.1

Is this task suitable for assessing radiotelephony communication? Why?

Listen to the recording and then answer the questions you will be asked by the examiner.

Follow up questions

1. What problems did the pilots report?
2. What did the pilots decide to do?
3. According to the report, how common are these kinds of problems in the US?



Activity 1.1

Is this task suitable for assessing radiotelephony communication? Why?

1. What skills does this task assess?
2. Does this task assess radiotelephony communication skills?
3. Is this type of content suitable for an LPR test task?

Activity 1.2

Is this task suitable for assessing radiotelephony communication? Why?



1. Tell me what you see in this picture.
2. Have you ever had a bird strike?
3. Tell me what happened.
4. How would you feel if a colleague told you he had had a bird strike?
5. What are your airline procedures for when you have a bird strike?



Activity 1.3

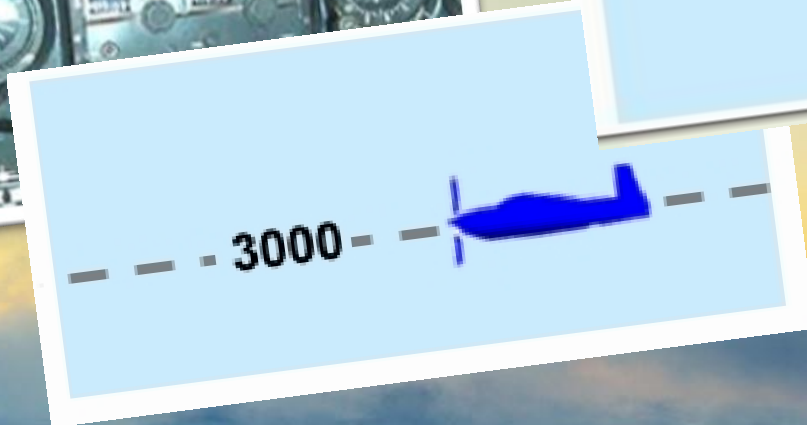
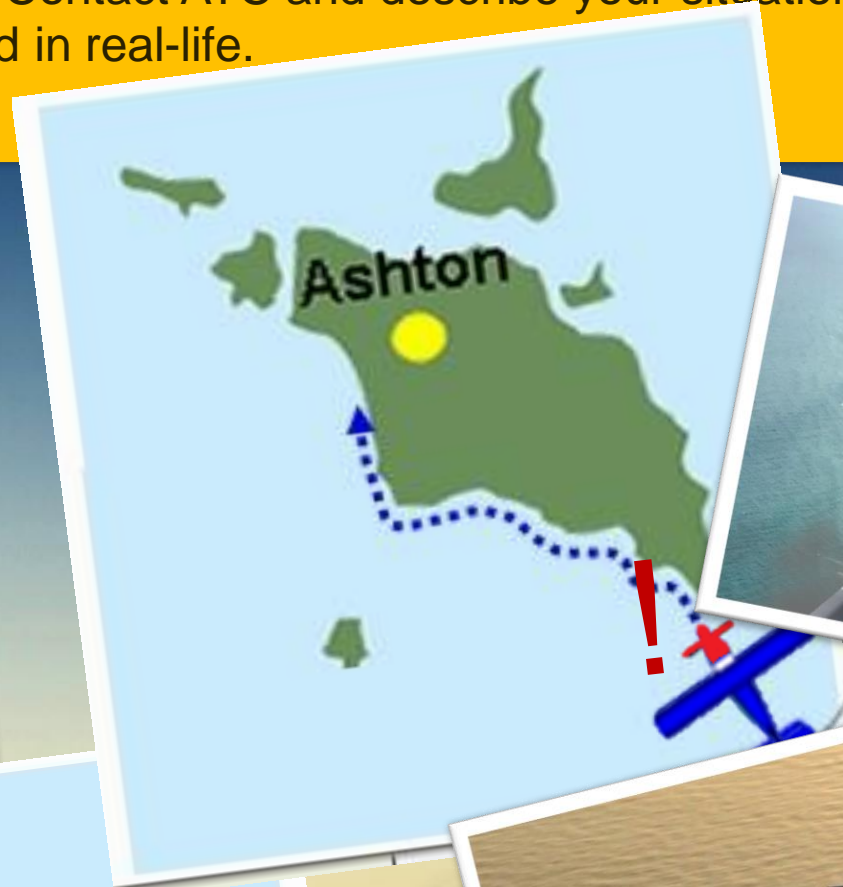
Is this task suitable for assessing radiotelephony communication? Why?

Instructions

- You will be given some cards showing a non-routine situation.
- You will have 1 minute to look at the cards.
- You will then interact with the examiner who take on the role of ATC.

TASK: Look at the cards. You are the pilot. Contact ATC and describe your situation. Respond to any questions and instructions as you would in real-life.

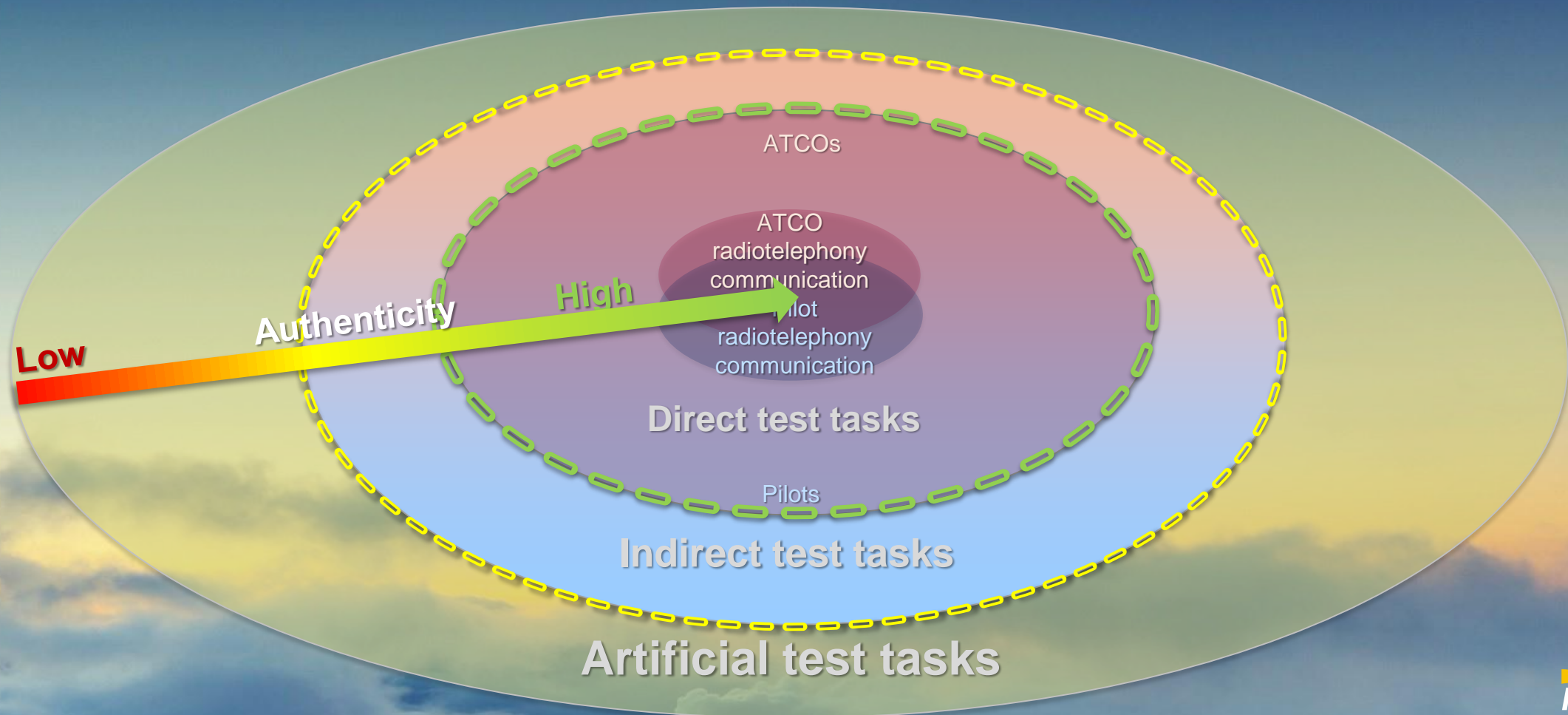
TASK: Look at the cards. You are the pilot. Contact ATC and describe your situation. Respond to any questions and instructions as you would in real-life.



Discussion

1. What does authenticity in a test task refer to?
2. How can test tasks be authentic?

Authenticity scale in LPR speaking tasks

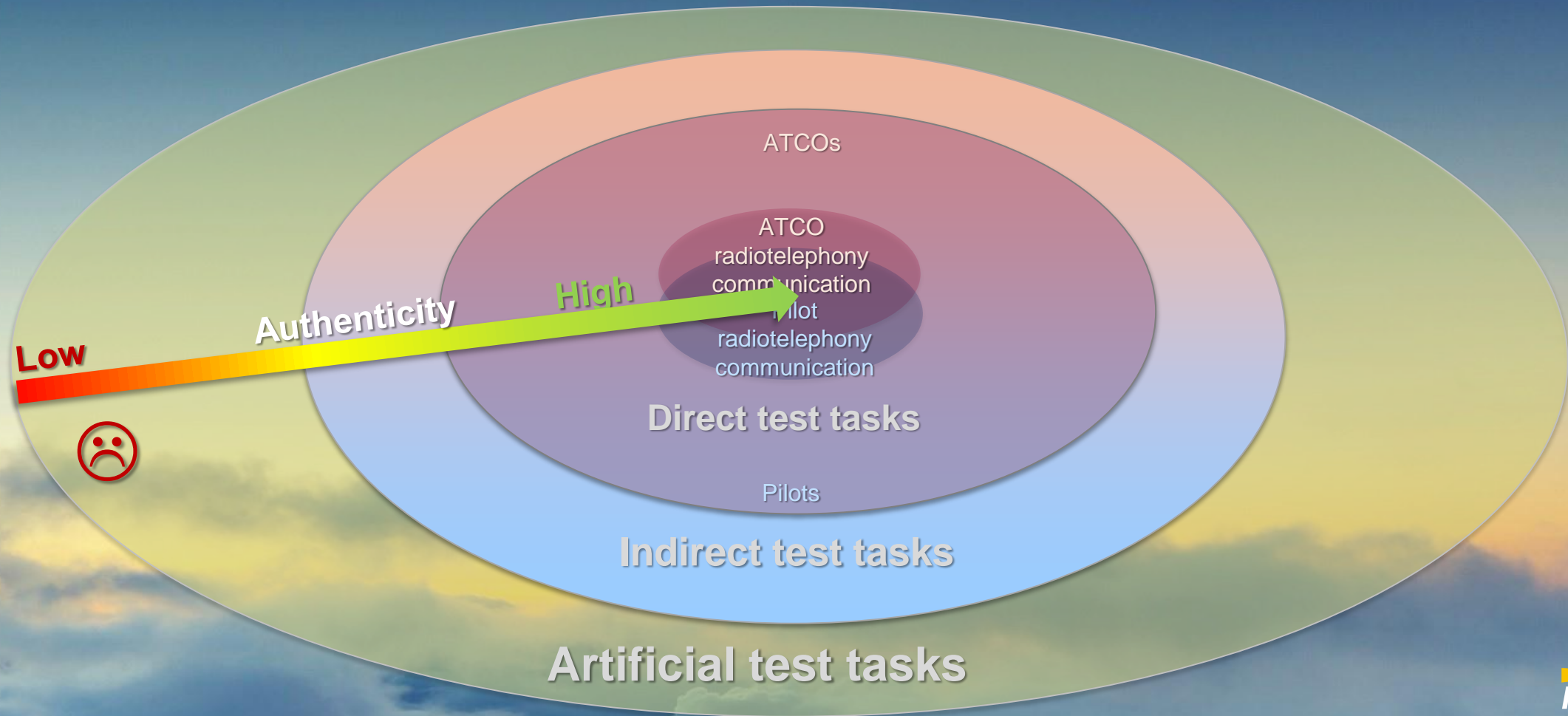


Artificial test tasks

Add one word in each space to complete this passage.

On July 17 last year, the pilots of Aerosky 565 reported a 1)_____ with their number two 2) _____. They suspected it was engine fire because cabin crew reported seeing 3) _____ trailing from that engine. However, the pilots didn't receive any fire warnings. After several failed 4)_____ to restart the engine the pilots decided to 5)_____ to Marlow Airport where they had just departed from. There was a lot of other inbound traffic to Marlow Airport, but ATC gave Aerosky 565 6)_____ for landing. After touching 7)_____ the pilots requested fire services to 8)_____ their left engine to check whether there was any damage or fire. Fire crew reported that a large eagle had got 9)_____ inside the engine. Luckily nobody was 10) _____, but the eagle had been killed on impact.

Authenticity?



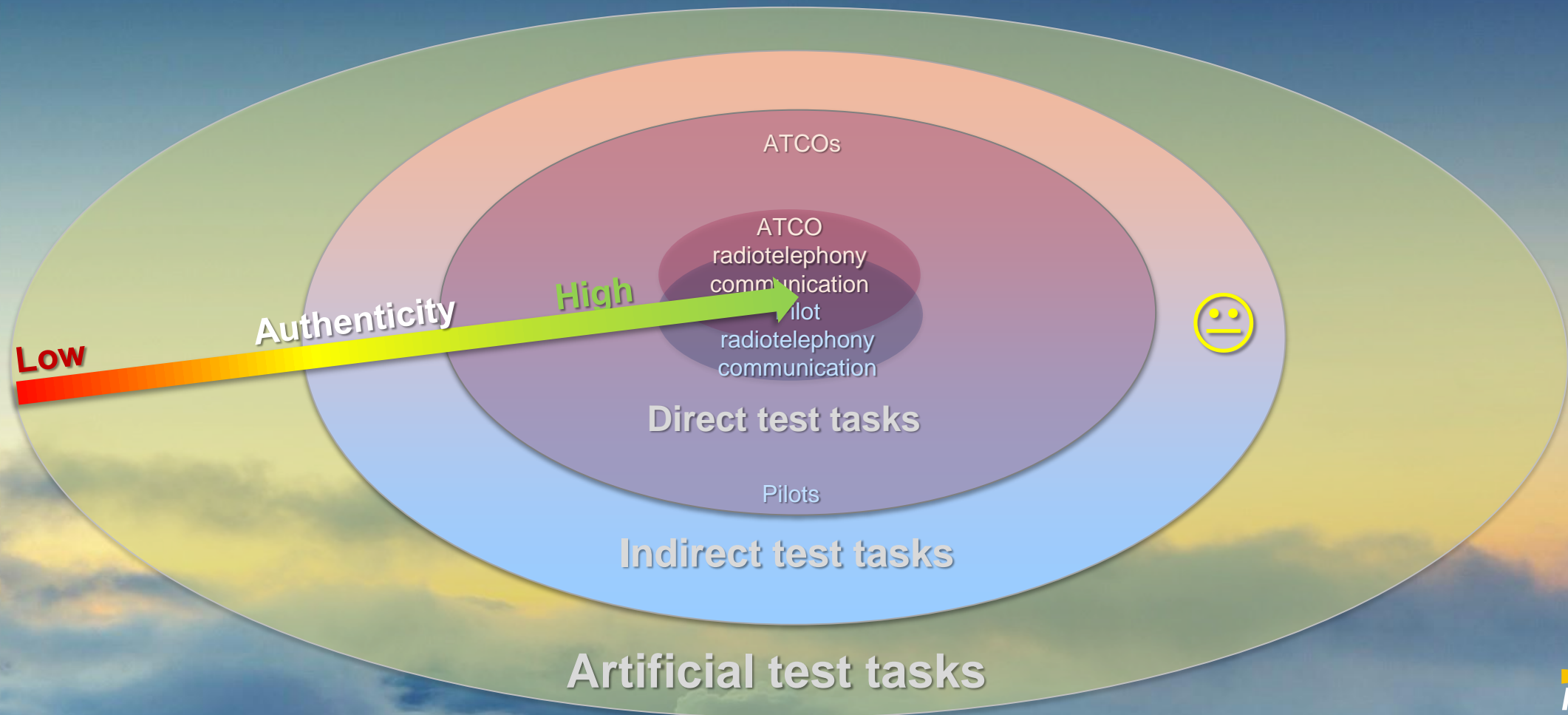
Activity 1.4

Is this task suitable for assessing radiotelephony communication? Why?

- **INSTRUCTIONS:** You will hear a recording between a pilot and an ATCO. You may take notes.
- You will then tell the examiner about the situation.



Authenticity?



Activity 1.5

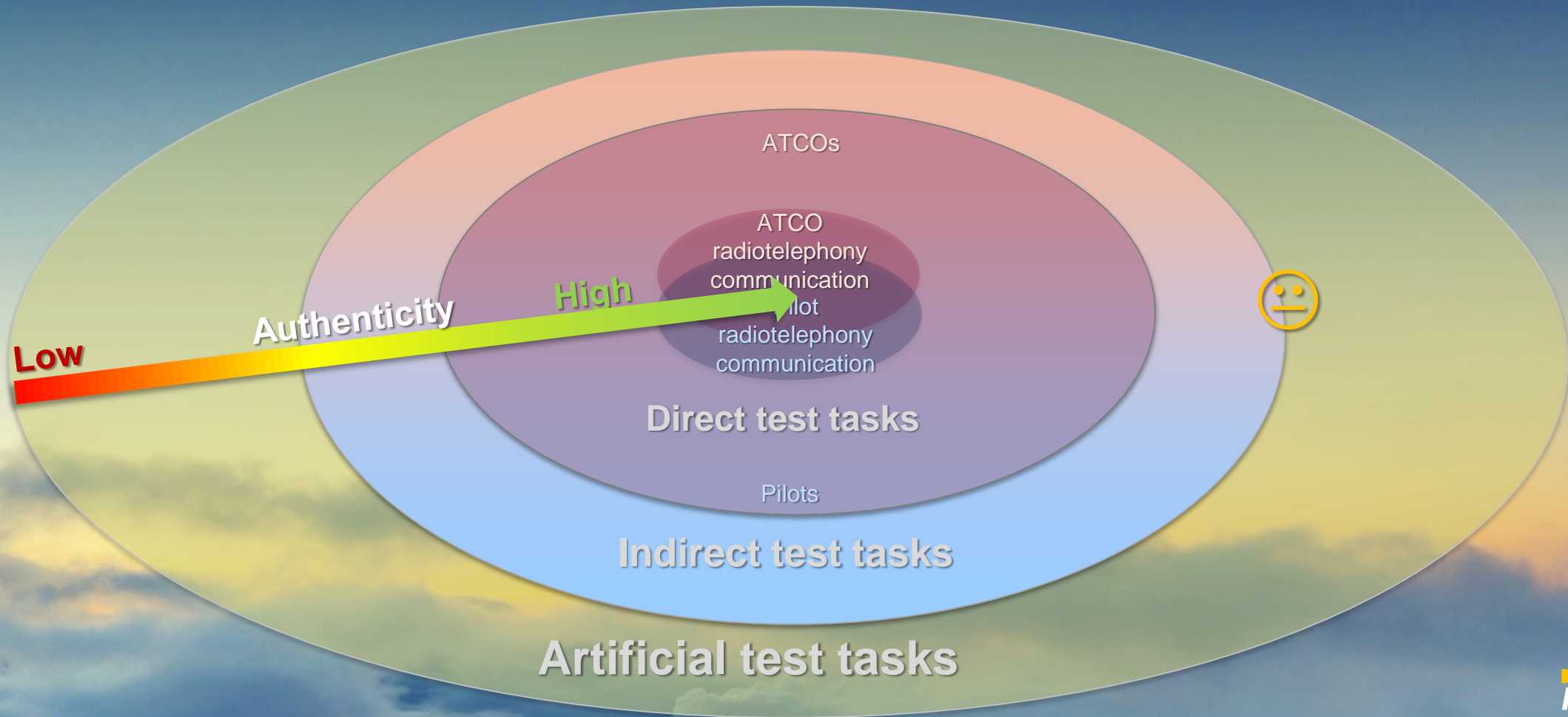
Is this task suitable for assessing radiotelephony communication? Why?

INSTRUCTIONS

- You will hear 6 short transmissions. After each recording summarise what the message was about.
- Say whether it was a pilot or controller transmission.
- Use your own words or use the words from the recording. Use as much information from the recording in your responses as possible.



Authenticity?



Activity 1.6

Is this task suitable for assessing radiotelephony communication? Why?

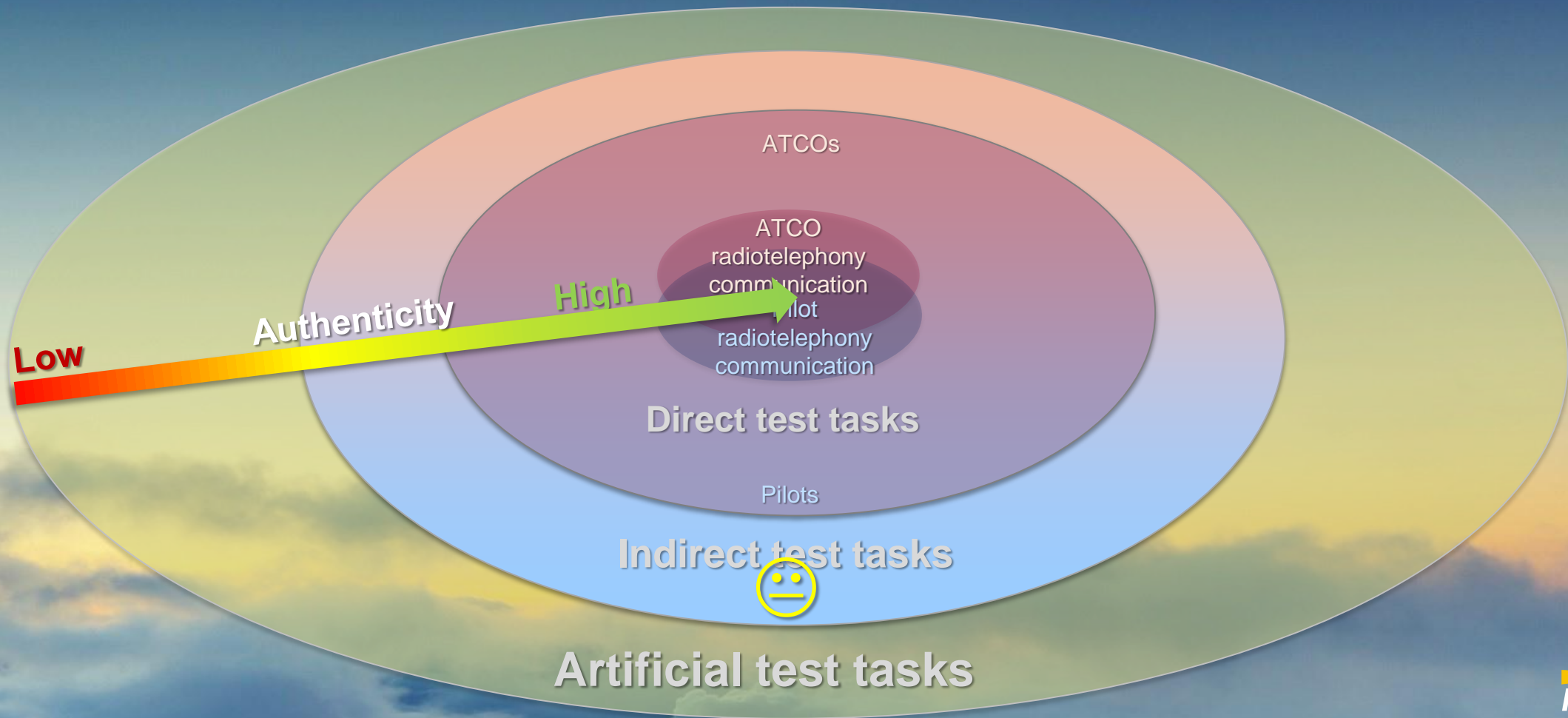
Instructions

- You will be given a task card with a non-routine situation.
- You will have 1 minute to read the task.
- Your examiner will then ask you some questions about this.

INFORMATION: You are the captain of an Airbus A330. You are cruising at flight level 370 on a commercial flight with 197 passengers. You hear a loud noise and then suddenly there is rapid depressurisation.

TASK: Describe your reaction to the examiner. What would you do? Who would you talk to? What would you say to ATC?

Authenticity?



Activity 1.7

INFORMATION: You are an area controller at Greenvale Control. Listen and respond to pilots on your frequency.

TASK: Respond to the examiner, who takes on the role of the traffic on your frequency. Use the response text in the table for each situation to create your transmissions.

Situation 1

You are an area controller at Greenvale Control. Listen and respond to pilots on your frequency. Use the words and phrases in the table to create your transmissions.

(Interlocutor script – not visible to test taker: Greenvale Control, Diamond 567, can you advise the nearest suitable airport with medical facilities? We have a medical issue on board and may need to divert.)

1. → Respond

Acknowledge. Tell the pilot: Drysdale Airport is the closest suitable airport. Ask if the pilot wants to descend.

(Interlocutor script – not visible to test taker: Roger thanks. We're monitoring the passenger now and will advise shortly.)

2. → Respond

Acknowledge.

(Interlocutor script – not visible to test taker: Ok, we will divert to Drysdale due medical emergency. Request descent, Diamond 567.)

3. → Respond

Acknowledge. Instruct the Diamond 567 to descend to FL 120 and report reaching. Ask about condition of passenger, age, gender, symptoms and whether there is a doctor onboard.

(Interlocutor script – not visible to test taker: The passenger is having a suspected heart attack. The passenger is a woman in her 50s. She's suffering from numbness and severe chest pains. A doctor is with her now.)

4. → Respond

Acknowledge. Ask what medical assistance the pilot needs on arrival.

(Interlocutor script – not visible to test taker: We'd like paramedics to meet us at the gate and board immediately, Diamond 567)

5. → Respond

Acknowledge. Give the weather conditions at Drysdale Airport: Wind calm, visibility 10 km and advise Diamond 567 will be number one for Runway 26 L.

Activity 1.8

Is this task suitable for assessing radiotelephony communication? Why?

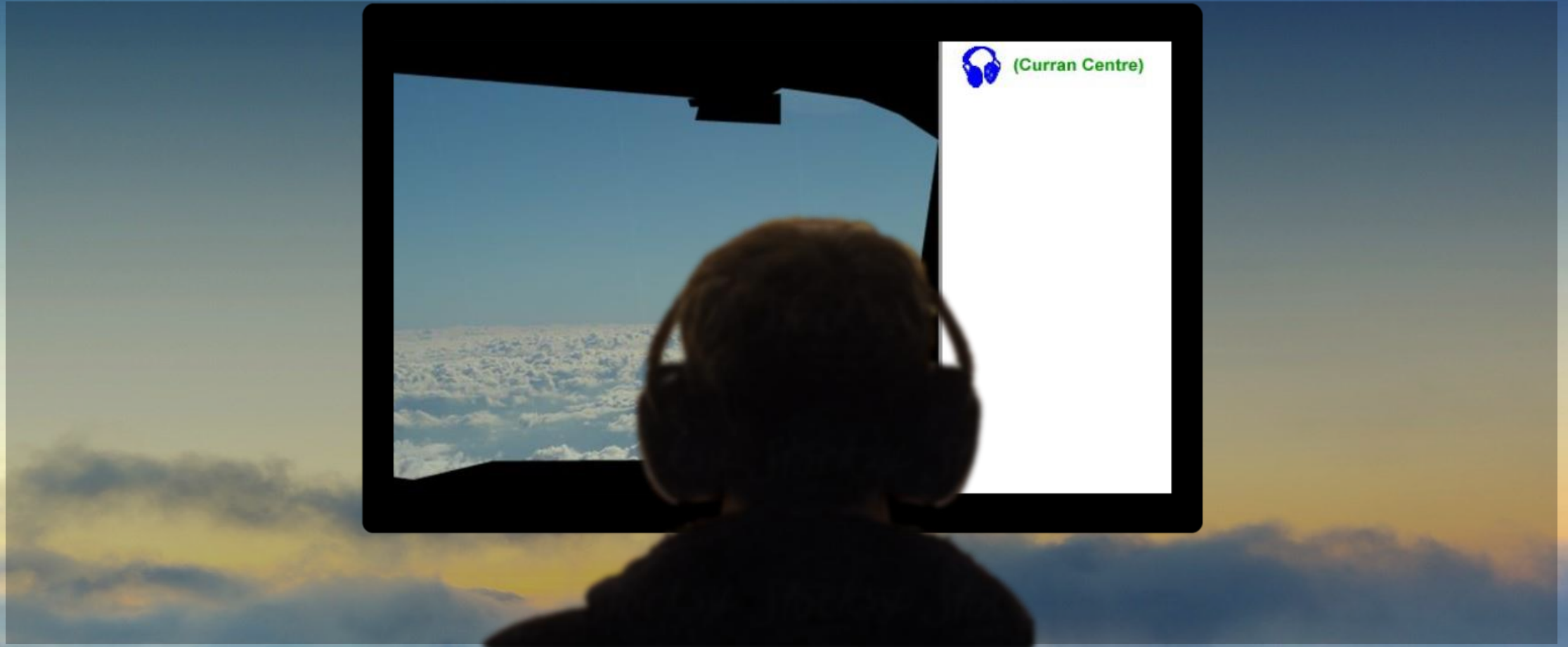
INFORMATION: You are the captain of an Airbus A330. You are cruising at flight level 360 on a commercial flight with 197 passengers.

TASK: Follow the picture prompts on the screen and communicate with ATC as you would in real-life.

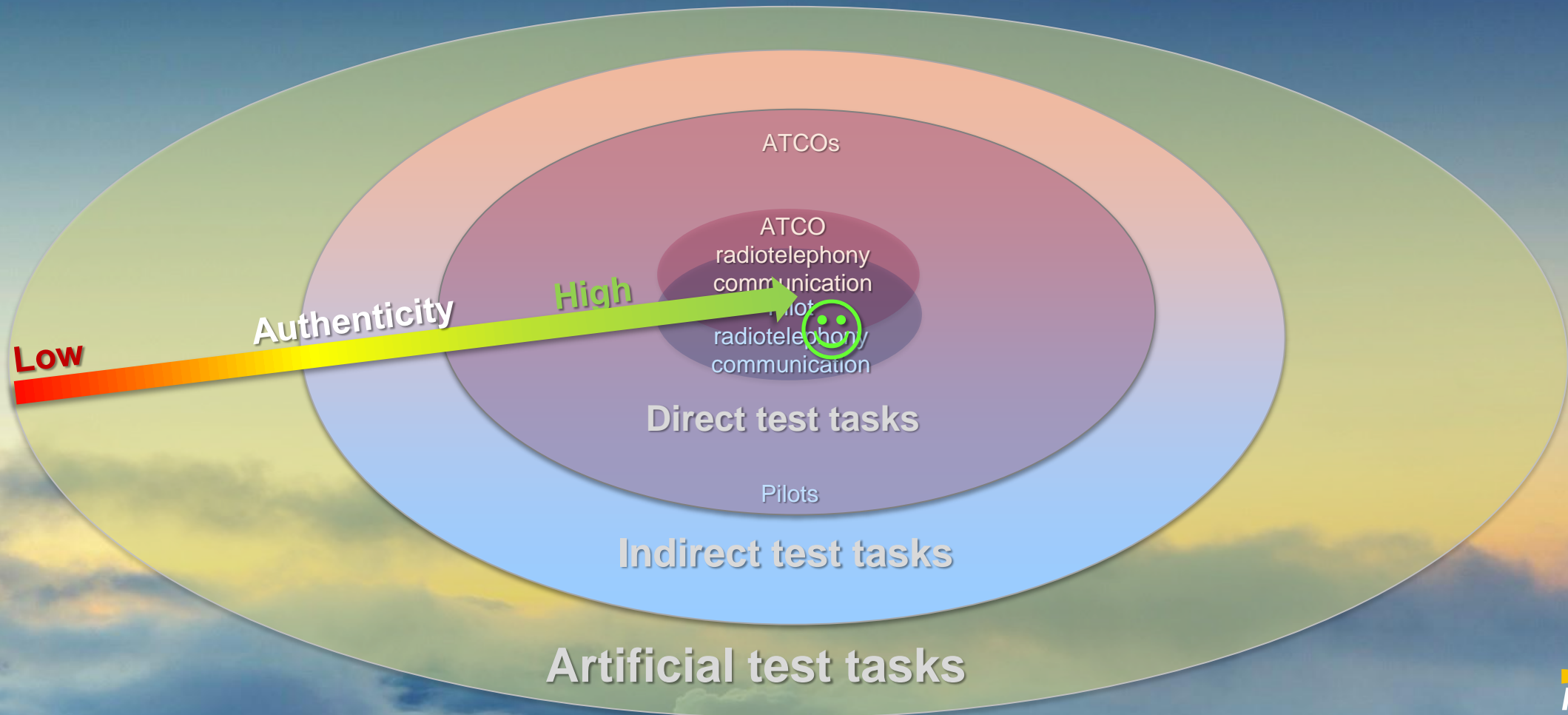


Activity 1.8

Is this task suitable for assessing radiotelephony communication? Why?



Authenticity?



Discussion

- 1) What skills do test takers need to do a general English test?
- 1) What skills should a general English test assess to produce a valid result?

Skills and knowledge needed: General English Test

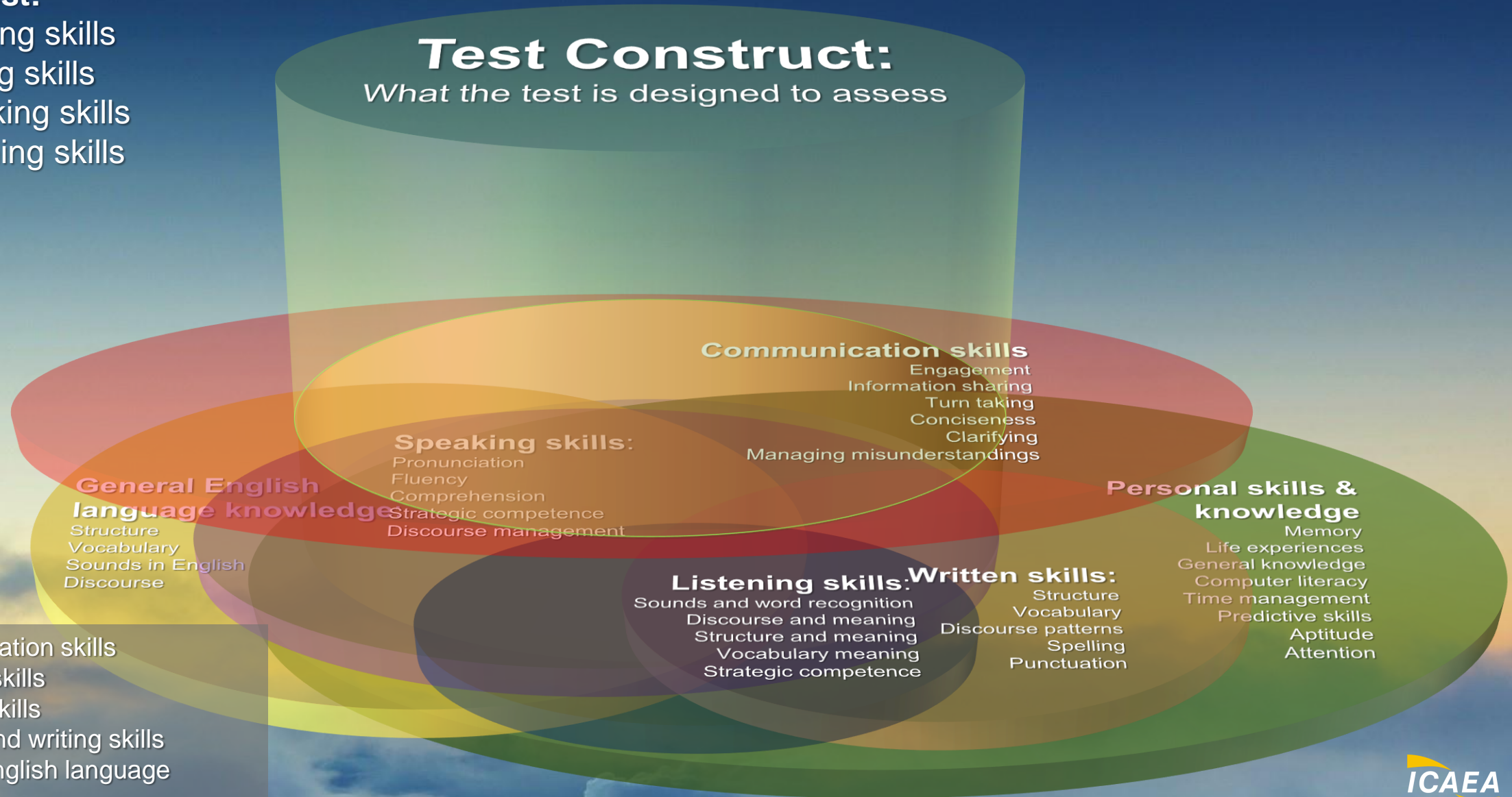


General English Test: Test construct

Example

IELTS test:

- Reading skills
- Writing skills
- Speaking skills
- Listening skills



- ✓ Communication skills
- ✓ Speaking skills
- ✓ Listening skills
- ✓ Reading and writing skills
- ✓ General English language knowledge

Discussion

- 1) What skills do test takers need to do an ICAO LPR test?
- 2) What skills should an ICAO LPR test assess to produce a valid result?

LPR Test construct

LPR Test Construct:
Skills and knowledge needed: LPR Test
What the test is designed to assess

High construct validity

- ✓ Radiotelephony speaking skills
- ✓ Radiotelephony listening skills
- ✓ Communication skills in radiotelephony contexts
- ✓ General Communication skills
- ✓ General Speaking skills
- ✓ General Listening skills
- ✓ General English knowledge

Radiotelephony listening
Radiotelephony communication skills:
Clarifying
Sufficiency
Conciseness
Managing misunderstandings
Adapting language to suit others
Strategic competence
Discourse management

General aviation job knowledge & experience

Aviation technical knowledge
Procedures
Equipment
Systems
Places

Speaking skills:
Pronunciation
Fluency
Comprehension
Strategic competence
Discourse management

Managing misunderstandings

Personal skills & knowledge
Memory
Life experiences
General knowledge
Computer literacy
Time management
Predictive skills
Aptitude
Attention

Listening skills:
Sounds and word recognition
Discourse and meaning
Structure and meaning
Vocabulary meaning
Strategic competence

Written skills:
Structure
Vocabulary
Discourse patterns
Spelling
Punctuation

Language skills and knowledge assessed

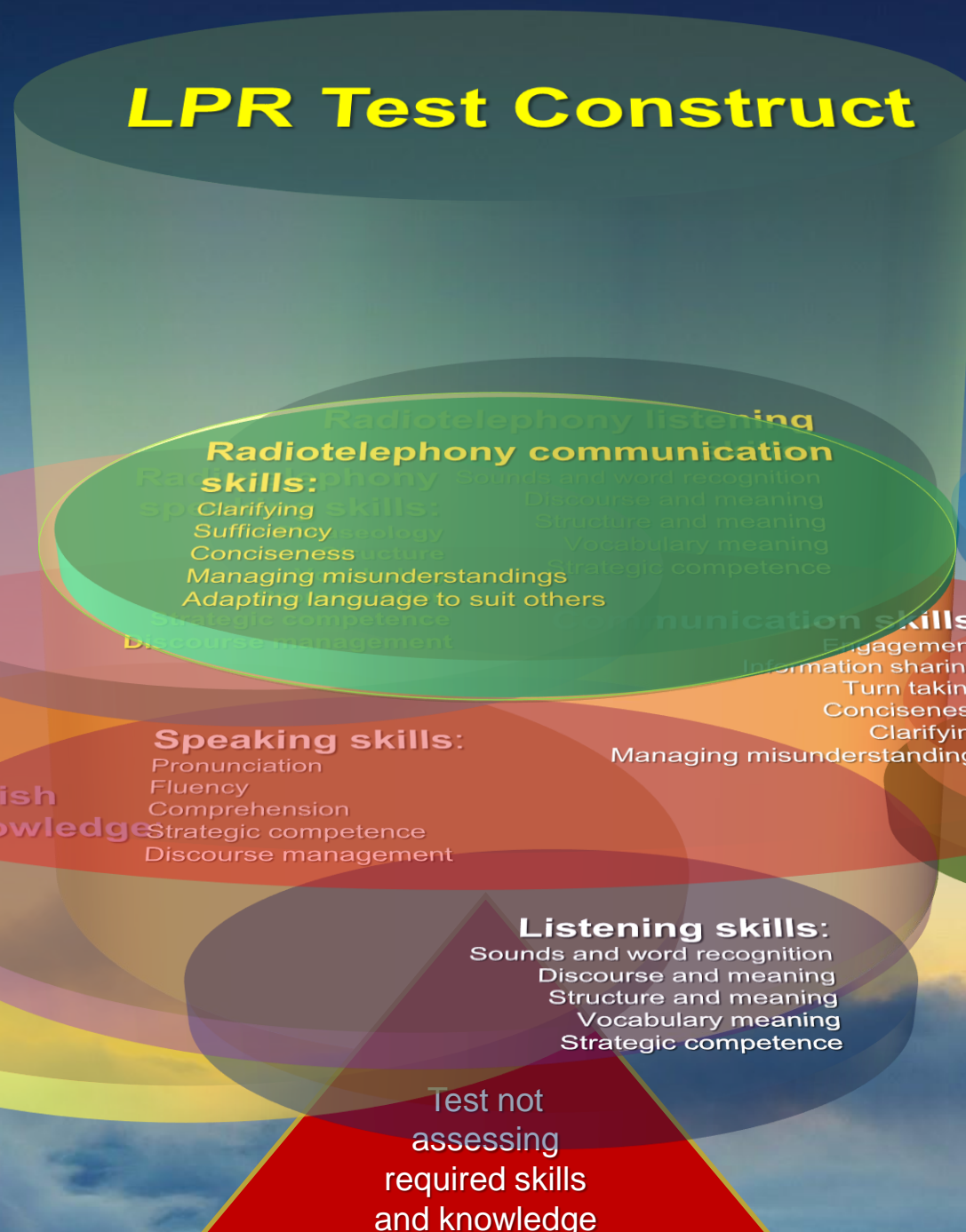
Skills needed to do the test but not assessed

LPR Test Construct:

What the test is designed to assess

- ✓ Radiotelephony speaking skills
- ✓ Radiotelephony listening skills
- ✓ Communication skills in radiotelephony contexts
- ✓ General Communication skills
- ✓ General Speaking skills
- ✓ General Listening skills
- ✓ General English knowledge

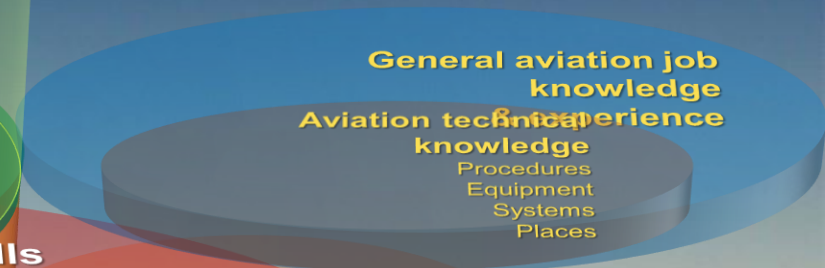
LPR Test construct



Low construct validity

- ~~Radiotelephony speaking skills~~
- ✓ Radiotelephony listening skills
- ~~Communication skills in radiotelephony contexts~~
- ✓ General Communication skills
- ✓ General Speaking skills
- ✓ General Listening skills
- ✓ General English knowledge

LPR Test construct



Low construct validity

- ✗ General aviation knowledge
- ✗ Aviation technical knowledge
- ✗ Writing skills
- ✗ Personal skills and knowledge

Test assessing irrelevant skills and knowledge

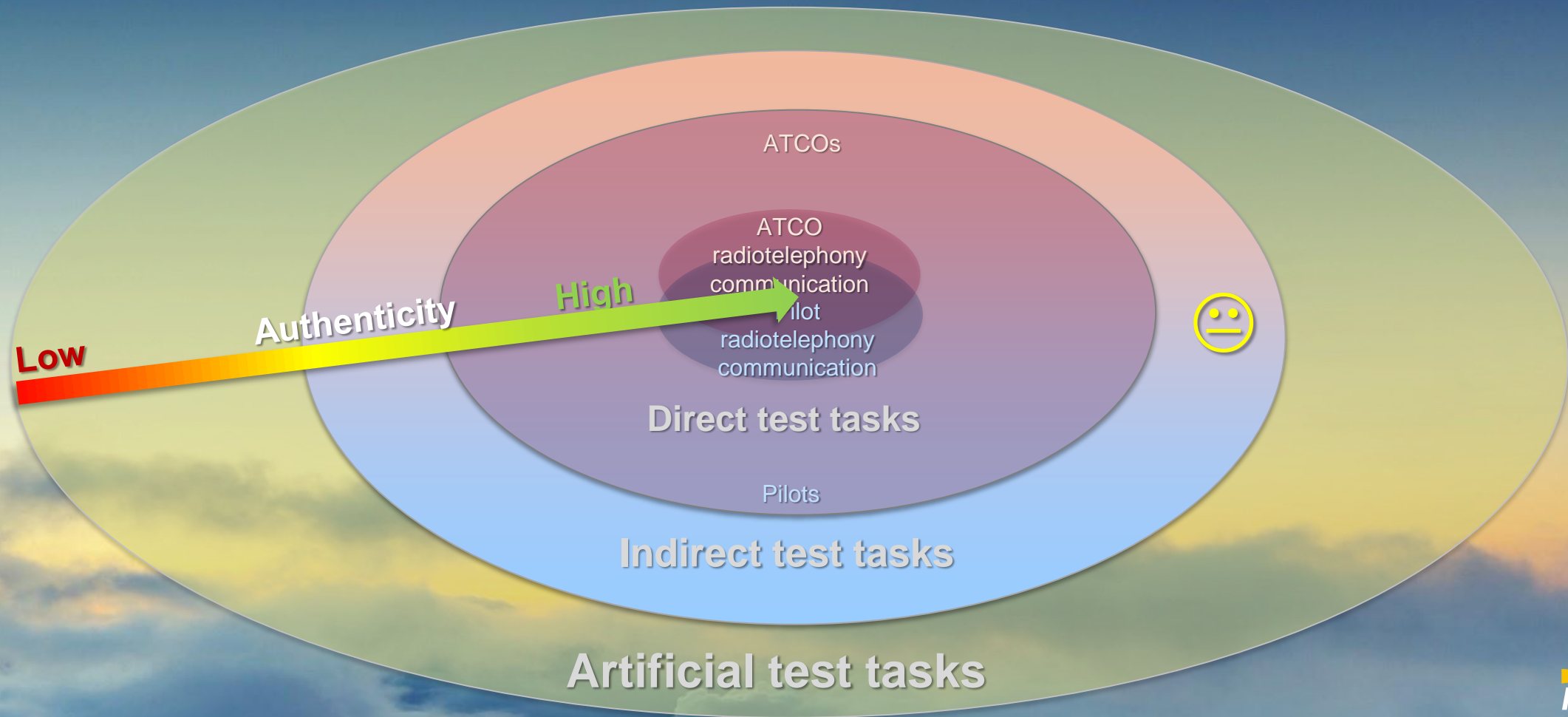
Activity 1.9

Is this task suitable for assessing radiotelephony communication? Why?

TASK: You will hear six short pilot-ATC exchanges. After each exchange tell the examiner what happened. Your examiner will then ask you some related general questions.



Authenticity?



Discussion

What task types are most suitable for assessing speaking skills in radiotelephony communication contexts?

Rank these from most useful (1) to least useful (6).

- ☐ Test takers describe a picture then answer topically related questions.
- ☐ Test takers listen to a pilot-ATC exchange then summarise the situation.
- ☐ Test takers listen to isolated transmissions and respond/readback the way a controller/pilot would.
- ☐ Test takers answer interview questions about what they would say/do in specific operational situations.
- ☐ Test takers participate in a role play, communicating with an interlocutor as a pilot/ATCO over the radio.
- ☐ Test takers select the best answer from multiple choice options to complete a written transcript of a pilot-ATCO exchange over the radio.

Discussion

Rank these from most useful (1) to least useful (6).

1. Test takers participate in a role play, communicating with an interlocutor as a pilot/ATCO over the radio.
2. Test takers listen to isolated transmissions and respond/readback the way a controller/pilot would.
3. Test takers listen to a pilot-ATC exchange then summarise the situation.
4. Test takers answer interview questions about what they would say/do in specific operational situations.
5. Test takers describe a picture then answer topically related questions.
6. Test takers select the best answer from multiple choice options to complete a written transcript of a pilot-ATCO exchange over the radio.

Criterion 1: Checklist

- ☐ Does the test instrument include tasks that directly assess how test takers communicate in real-world radio communication situations?
- ☐ Do the test tasks require test takers to communicate in non-routine or unexpected situations using radiotelephony?
- ☐ Does the test instrument include separate tasks to assess both listening and speaking skills in radiotelephony communication contexts?
- ☐ Are the test tasks specific to the needs of pilots or controllers in how each type of test taker needs to communicate over the radio with controllers or pilots?

Criterion 7:

Test instruments need to contain appropriate tasks that assess test-takers' abilities to understand and communicate in real-world contexts.

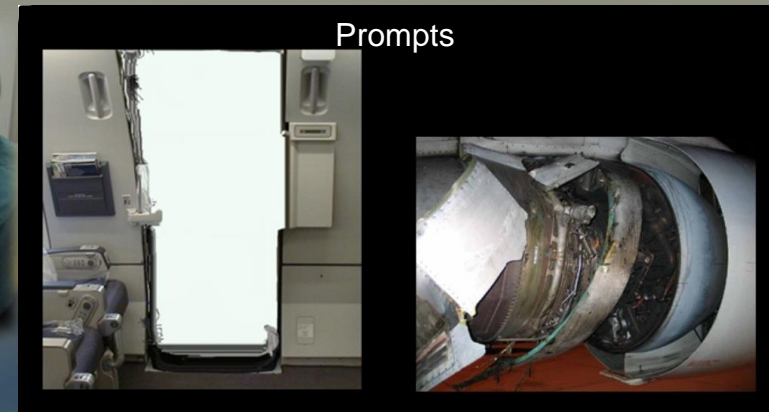
Activity 7.1

Does this task assess language skills related to real-world communication needs?

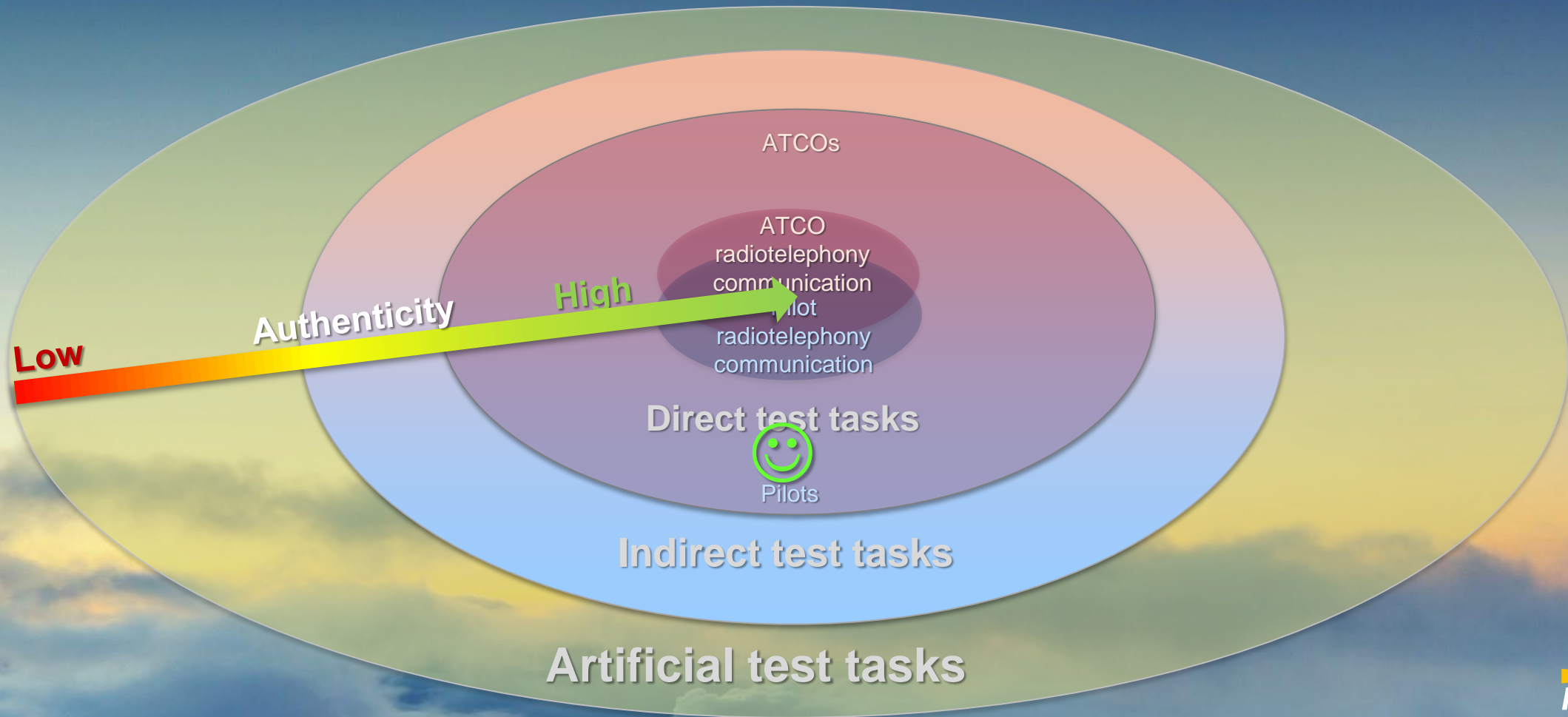
- You are now going to talk about the unusual flight situation you experienced in the previous part of the test as part of an incident debrief.
- For this part, the examiner is your chief pilot. He/She needs to find out what happened during the unusual flight situation you experienced in the previous part of the test. He/She will ask you questions to complete a report. Take part in the debriefing role play as a pilot.

Interlocutor prompts:

1. Can you describe what happened?
2. What did you need to do? Why?
3. What do you think caused this problem?



Authenticity?

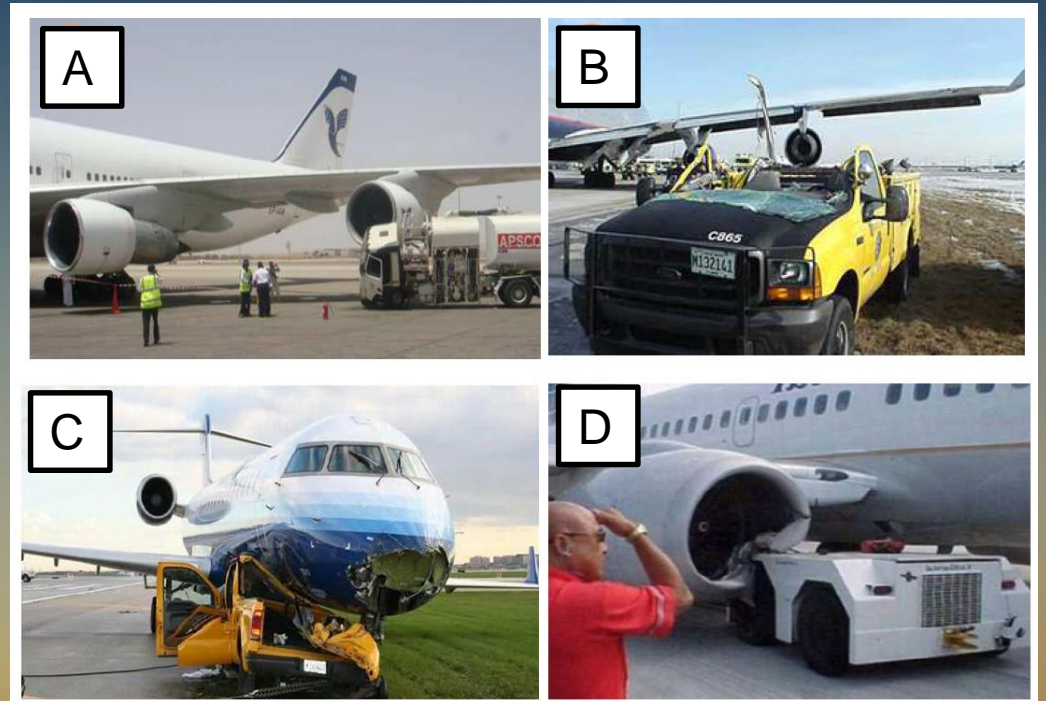


Activity 7.2

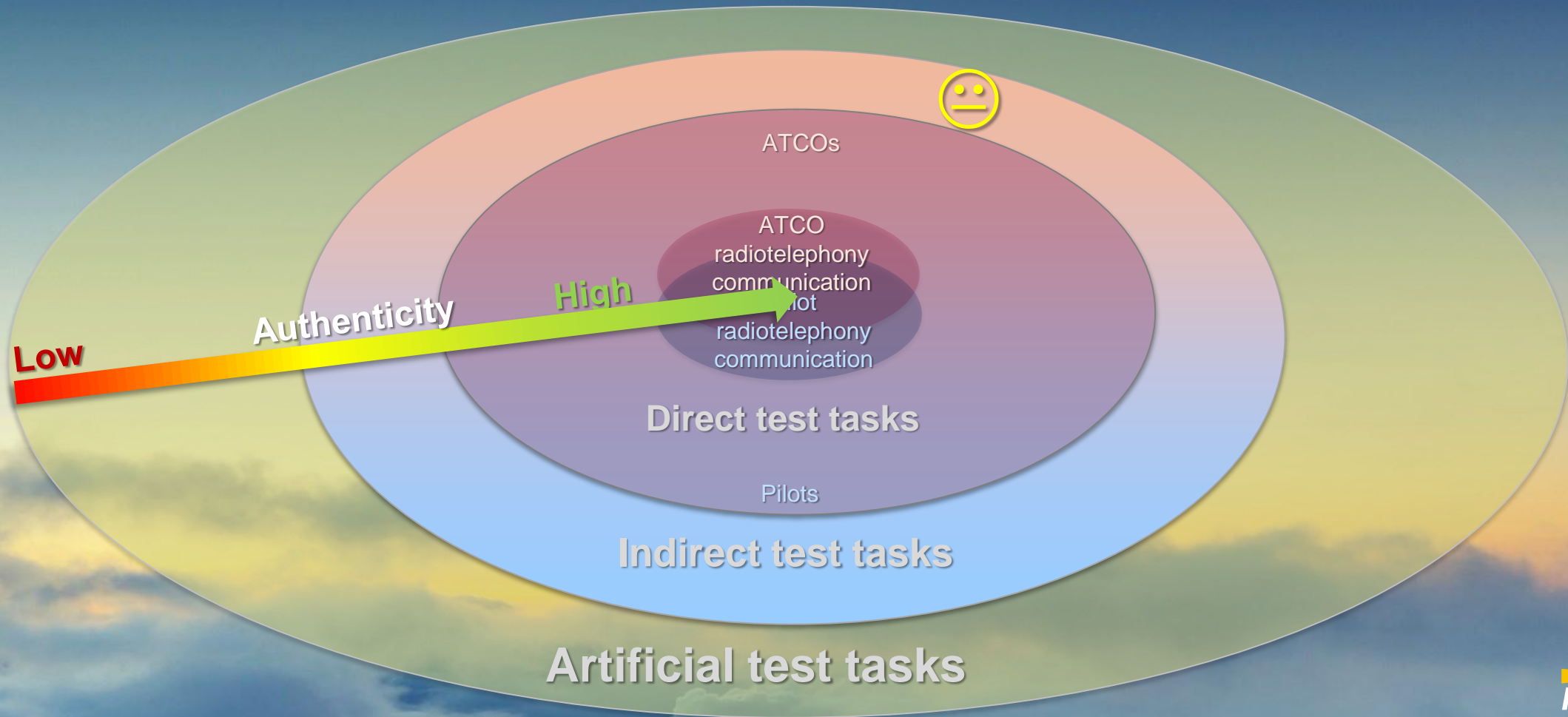
Does this task assess language skills related to real-world communication needs?

Interlocutor questions:

1. What is similar about these four pictures?
2. Which one do think is the most serious? Why?
3. What do you think happened in Picture A?
4. What do you think caused this incident?
5. Tell me what you would do if you were working in the tower if the situation in Picture D happened?
6. What kind of things would the pilot report to you and request?
7. What effect would this situation have on operations?



Authenticity?



Activity 7.3

Does this task assess language skills related to real-world communication needs?

INFORMATION: You are the area ATC supervisor in the photograph. ATC from a neighbouring FIR will call you to report an issue.

TASK: You need to coordinate with the controller on the phone. Find out what the problem is and how you can manage the situation. The examiner will take on the role of the controller you are talking to over the telephone. Ask and answer questions as you would during a normal coordination call and fill out the situation form. The examiner will start.

Interlocutor prompts:

Start: “Hello (...) Control. Be advised, we cannot accept any traffic from you at the moment.



Activity 7.3

INFORMATION: You are the area ATC supervisor in the photograph. ATC from a neighbouring FIR will call you to report an issue.

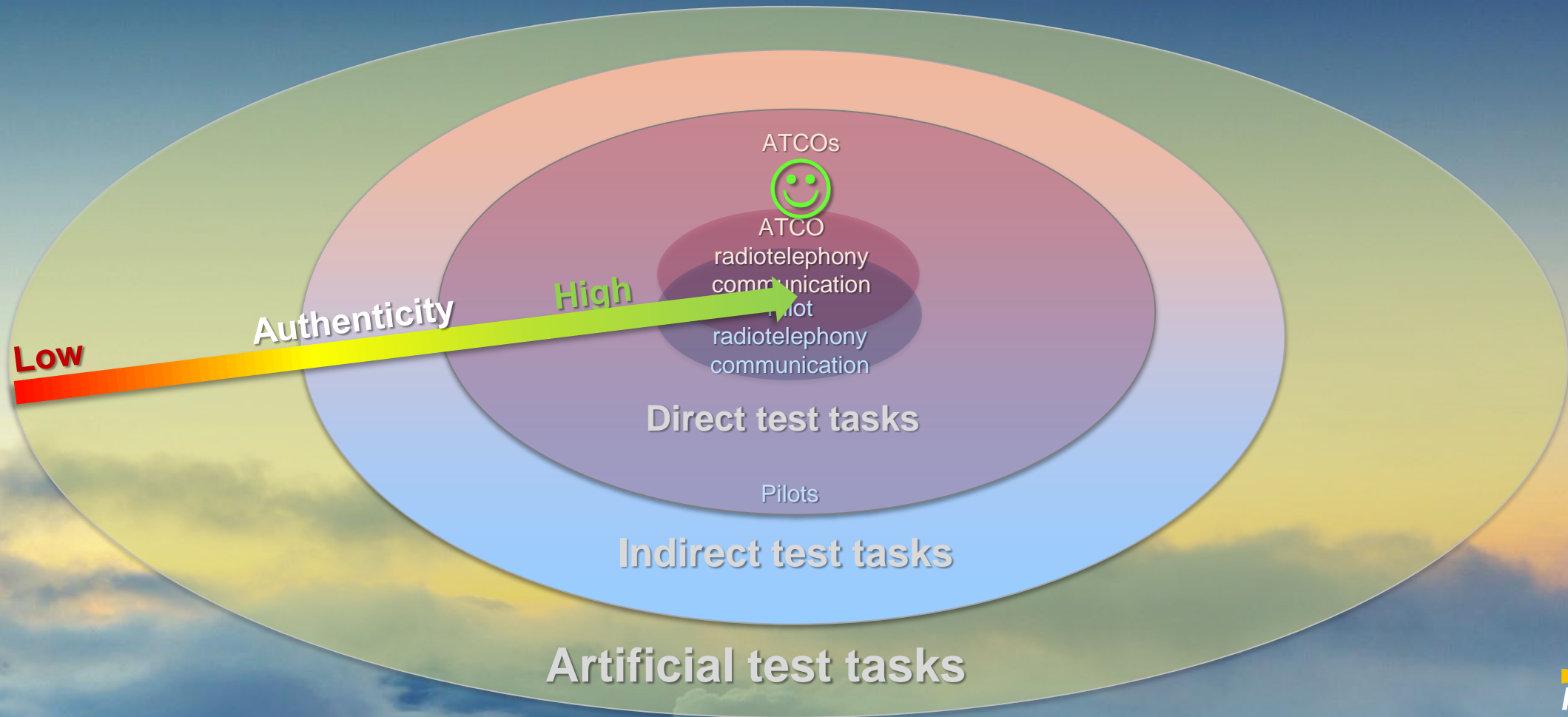
TASK:
how you
talking
call and

1. Problem reported by neighbouring FIR ACC:	
2. Reason for issue:	
3. Other details:	
4. Expected delay:	
5. Actions taken:	
6. What your unit can offer to help:	

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ould during a normal coordination



Authenticity?



Activity 7.4

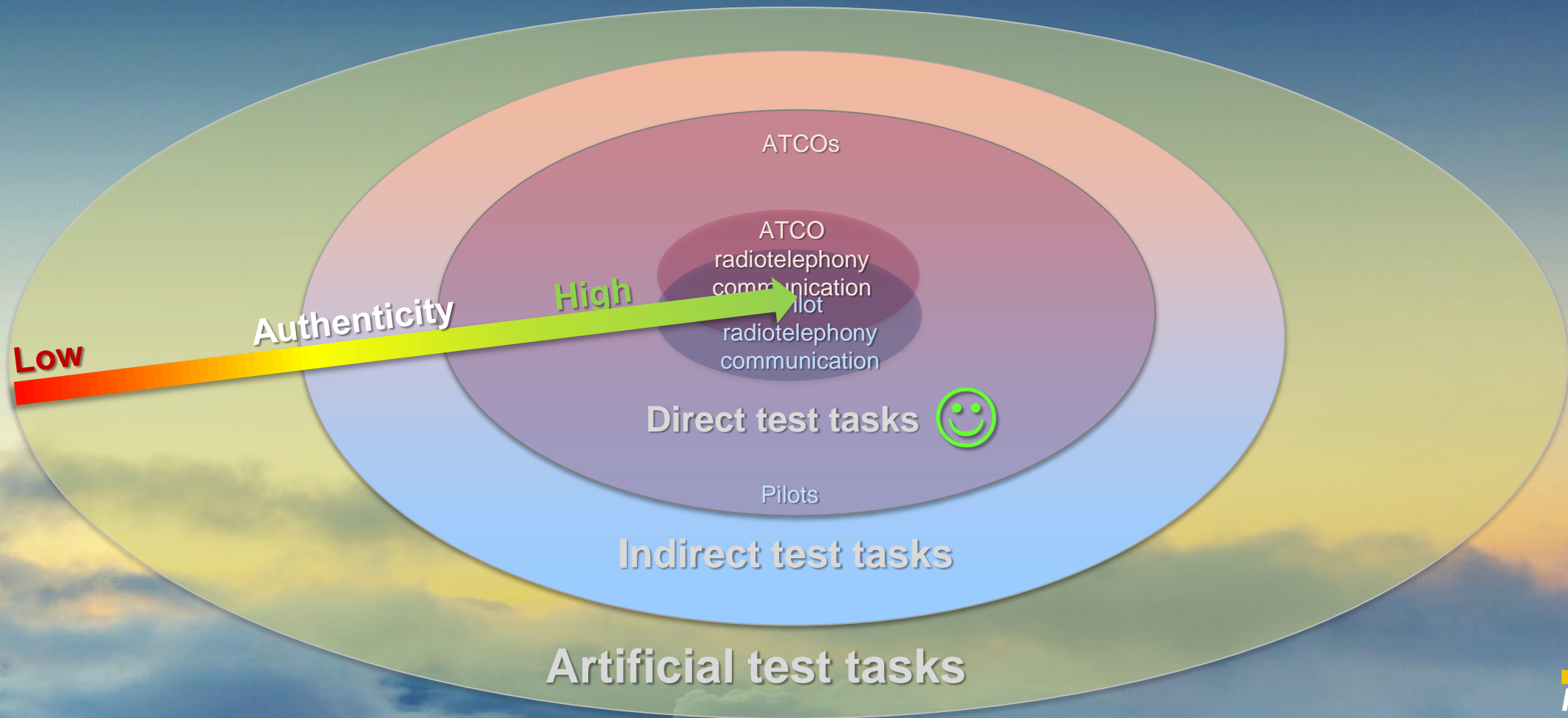
Does this task assess language skills related to real-world communication needs?

INFORMATION: You are the pilot of a B787. You are at cruise level on a commercial flight with 230 passengers. You experience an in-flight emergency related to engine failure and need to perform an emergency landing.

TASK: The examiner is your company flight dispatcher. He/She needs to find out about your current situation so that he can provide you with information about nearby airports and how their equipment and resources. He/She will coordinate with you options for your landing. Ask and answer questions as you would do in real-life. The examiner will start.



Authenticity?

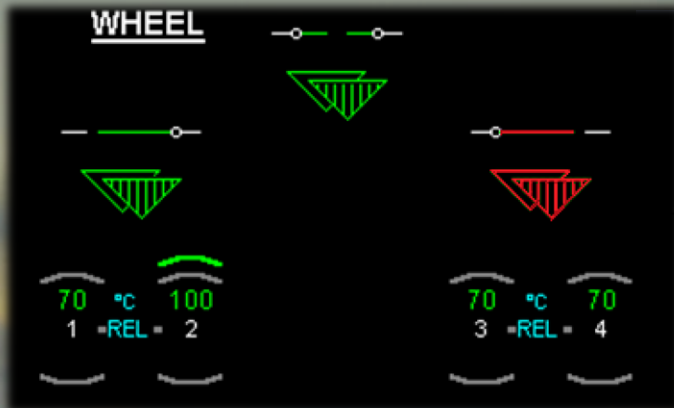


Activity 7.5

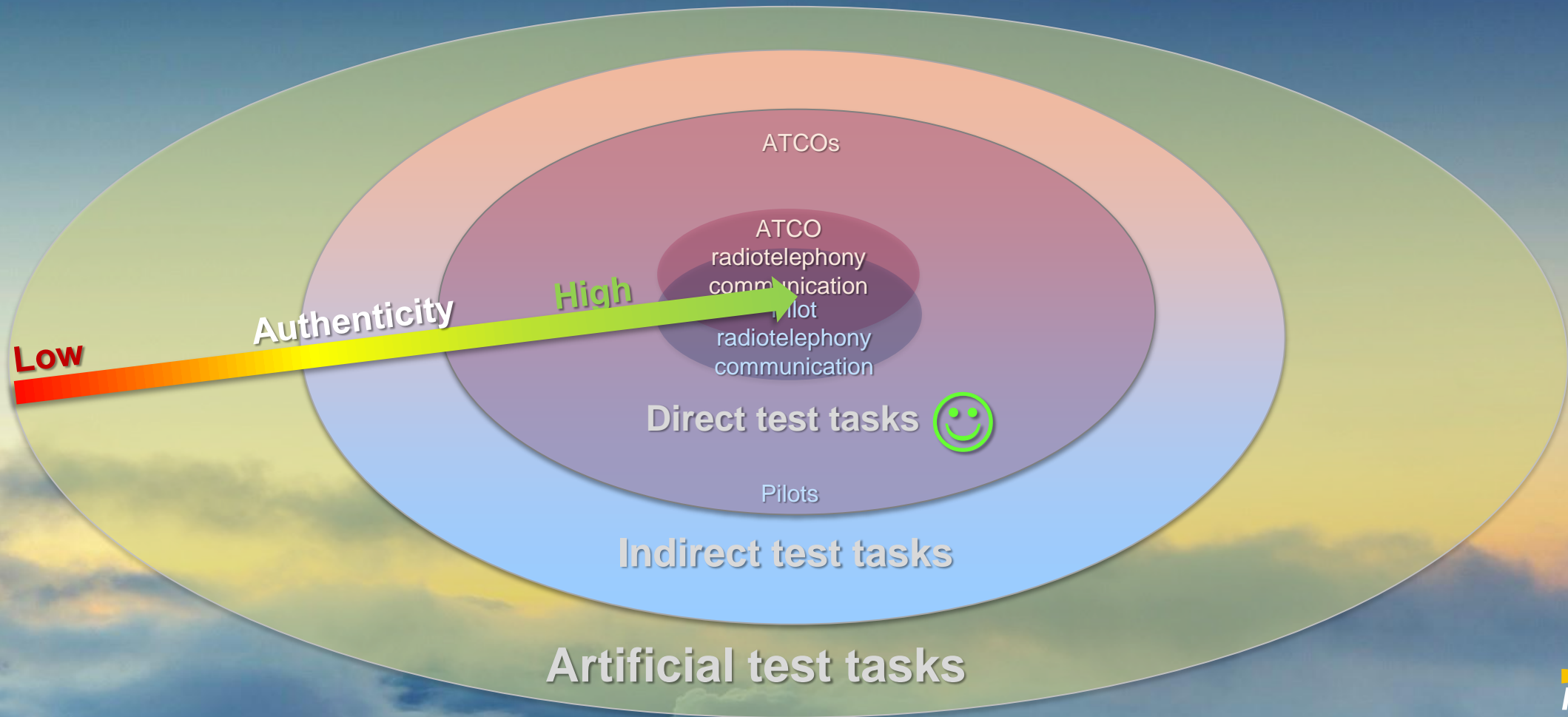
Does this task assess language skills related to real-world communication needs?

INFORMATION: You are the captain of an A320. You are on approach. You receive a landing gear unsafe warning so you decide to contact the airline maintenance team.

TASK: The examiner is a maintenance engineer who will help you troubleshoot the malfunction. Ask and answer questions as you would do in real-life. The examiner will start.



Authenticity?



Activity 7.6

Does this task assess language skills related to real-world communication needs?

You will hear a short phone call between a pilot and controller.

Listen to the recording answer the questions in the table by writing short answers.



1. Why did they pilot call?	
2. What was the location of the issue?	
3. What issue did the pilot report?	
4. Who caused this issue?	
5. What action did the pilot take?	
6. What was the second issue reported by pilot?	
7. Where was the second issue located	
8. Was authority given that caused these issues?	
9. What action will the controller take?	



Criterion 7: Checklist

- ☐ Does the test instrument include tasks that directly assess how test takers communicate in job-related real-world situations?
- ☐ Does the test instrument include separate tasks to assess both listening and speaking skills in real-world job-related contexts?
- ☐ Are the test tasks specific to the needs of pilots or controllers in how each type of test taker needs to communicate in real-world situations?