

## Teacher's Manual : LANDMARK English Communication II

# Can-Do リスト解説書

### Can-Do 尺度に基づいた学習と評価のアプローチおよび授業展開例

## 付属資料

本付属資料では「Can-Do リスト解説書」を補足すべく開発を行った「発問シナリオ」のサンプルとその利用にあたっての留意事項について扱っている。解説書では「本文の各パートの Q&A に基づいた活動」について、「本文理解の深さを問う活動における発問シナリオの展開の仕方」(pp.17-26)として、Lesson 5 の“Science of Love”を取り上げて具体的な発問シナリオ設計を行った。

「教科書本文を読んで、本文の流れを踏まえて重要な内容を理解することができる。」

- ① 前提となる事実や出来事に基づいた質問に答えることが難しい。
- ② 前提となる質問には答えられるが、中心の命題となる質問には答えることが難しい。
- ③ 命題となる質問には答えられるが、背後の理由や詳細情報を答えることが難しい。
- ④ 命題となる質問に加えて、背後の理由や詳細情報への展開を答えることができる。

発問シナリオの設計にあたっては、上記 Can-Do 尺度を利用し、発問を「前提」「命題」「展開」に段階分けして理解の深さを問えるように、一連の発問の流れを組み立てた。それぞれの発問を個別にバラバラに問うのではなく、前後の文脈に位置付けて問うことで、理解を確認しつつ、次第と深い読みを誘導できるように工夫をしている。シナリオでは発問と想定する回答を示しているが、作成に際して下記の点に留意した。

- ・ 本文を読んでいないと意味をなさない発問や漠然とした抽象的な問いかけは極力避け、前後の発問の文脈の中で意味を持たせつつ、足場を作りながら段階的に引き出す。
- ・ キーワードのスキニング的な読み取りに終始しないように、文構造を変えたり、パラフレーズをしたり、発問の視点を変えながら問いを立てる。
- ・ 本文を単に抜き出した回答とならないように問いを工夫するとともに、回答におけるキーワードの意味を理解しているかフォローアップの問いかけを行う。
- ・ 回答を受けてパラフレーズして繰り返したり、いくつかの回答をつなげてまとめて述べたりすることで、回答のモデルを示しつつ、回答者以外の理解も促進する。
- ・ 前の発問への回答を再度意識させたり、パートをまたいだ理解確認の問いを入れたり、理解した情報を保持しつつ、次へと理解をつないでいく。
- ・ 必ずしも本文に出てきた順に発問を立てるのではなく、全体の情報構造を踏まえた上で、発問の流れを再構成して、機械的な読み取りとならないようにする。

「教科書本文を読んで、発展した内容の質問について考えて答えることができる。」

- ① 教科書に書かれている内容についての質問に答えることも難しい。
- ② 教科書に書かれている内容についての質問に答えることならできる。
- ③ 教科書の内容から発展した質問について、自分なりの考えを述べることができる。
- ④ 他人の意見と比較して、(補足資料を踏まえた上で) 考えをまとめることができる。

「コミュニケーション英語 I」解説書付属資料の「発問シナリオ」例では、Lesson 4 の“Gorillas and Humans”について、CLIL (内容言語統合型学習) 的なアプローチを取り入れて、上記 Can-Do 尺度のように本文からテーマを深めて理解をし (インプット)、産出へとつなげていくような (アウトプット) 発問の工夫を行った。そのため発問シナリオでは、追加の情報を説明し、テーマ的理解を深めていくやり取りに紙面を多く割いている。

「教科書本文を読んで、テキストの情報のつながりを深く理解することができる。」

- ① 事実や出来事に基づいた質問に答えることが難しい。
- ② 事実や出来事は答えられるが、大きな論理的流れを答えることが難しい。
- ③ 大きな論理的な流れは答えられるが、細かな行間の流れを答えることが難しい。
- ④ 細かな行間の流れに加えて、足りない情報を推測で補いながら答えることができる。

本付属資料の「コミュニケーション英語 II」の発問シナリオでも、ある程度補足の説明を加えることで、テーマを発展させて認知と思考を促す発問を取り入れたが、そうしたテキスト内の事実に基づいた読み取りから、テキスト外的事実に基づいた読み取りへの展開だけでなく、テキストに書かれている情報をより深く推論的に読み解いていく発問に比重を置いた。上記の Can-Do 尺度は事実に基づいた展開の読み取りに加えて、さらに文と文との行間を読む「橋渡し推論」や行間を超えて明示的には示されていない内容を補いながら読む「精緻化推論」ができるようになる段階を意識している。

こうした推論発問は必ずしも先に示した事実発問の深さを示した Can-Do 尺度の「展開」の一環としてばかりではなく、「命題」部分の深い読み取りなどとも関わる。推論はテキストの読みと無関係な当て推量ではなく、テキスト中に根拠となる証拠があることが重要となる。Lesson 5 では、恋に関する科学的理論をそれぞれのパートで扱っており、理論間の比較を促すことで、書かれた事実に基づいた推論的理解をさせるように図っている。本発問シナリオでは、顕著な推論発問箇所には [Inference] とつけおり、また、CLIL 的な追加のやり取りを含めた発展的なやり取りについては [Advanced] としている。

本発問シナリオは展開例であり、目の前の生徒に合わせて足場や挑戦度を調整する必要がある。また、実際の授業では、多角的理解のため要約活動やグラフィック・オーガナイザーを用いた活動との併用が望ましい。「コミュニケーション英語 I」の発問シナリオ例とあわせて参照し、生徒の探究的な興味をかきたてるような発問を工夫してほしい。

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本文理解の深さを問う発問活動(各パート Q&A 活動) Can-Do 尺度例

「教科書本文を読んで、本文の流れを踏まえて重要な内容を理解することができる」

- |                                    |           |
|------------------------------------|-----------|
| ① 前提となる背景的事実や出来事について答えることが難しい。     |           |
| ② 前提となる背景的事実や出来事について答えることができる。 ……  | ② 「前提」 発問 |
| ③ 中心の命題(イイタイコト)について答えることができる。 ……   | ③ 「命題」 発問 |
| ④ 背後の理由や詳細情報などの展開について答えることができる。 …… | ④ 「展開」 発問 |

※ Teacher's Manual ⑦ 「Can-Do リスト解説書」(pp.19-24) 参照

**Lesson 5 “Science of Love” 【Part 1】**

【イントロダクション】

T: Lesson 5 is about a presentation in a class at a high school. There are four students in the presentation: Garcia, Andy, Megumi and Beth. What is the role of Garcia in the presentation?

S: He is the moderator.

T: Right. The other three students are presenters in this presentation. ②What is the topic of the presentation?

S: It is why people love someone.

【恋に落ちるとどうなるか】

T: OK. Have you ever fallen in love with someone? ②Can you say everyone falls in love?

S: Yes, most of us fall in love.

T: ②Is it universal that people fall in love?

S: Yes, I think it is universal.

T: Right. Falling love with someone is a universal fact. Then, ③how do people feel when they fall in love with someone? What happens when they love someone? Any example of their behavior?

S: Some people cannot think of anything else.

T: What do you mean?

S: I mean that people can think of only the one they love.

T: Right. Good job. Some people cannot help thinking of anything but love. ③Why do they become like that?

S: Because they get so crazy about someone.

【恋の気持ちをコントロールできるか】

T: Exactly. When people like someone so much or even too much, sometimes they can only think of love. ④Can you control such a feeling of love?

S: No, we can't. It's beyond our control.

T: Right. Then, can you tell me ④what happens to us when we can't control the feeling of love? Can

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you give any more examples?

S: People might even lose their appetite and not be able to sleep.

T: True. Some people might possibly behave in such a way because of love. They can't eat or sleep. They do nothing but think of the one they love. Love seems to have a power that is often beyond our control.

### 【恋に関する理論】

T: Don't you think it's strange? ④Are there any theories which explain what brings us that strange feeling of love?

S: Yes, there are three theories from the fields of psychiatry, genetics, and biology.

T: Okay. ④What can you learn from the theories from those different viewpoints?

S: I think we can learn the cause of the complicated feelings of love.

T: True. Love seems strange and complicated, but these theories can tell us why people fall in love. Is there anything else we can learn from these theories?

S: How people choose the people they love when they fall in love.

T: Right. Let's first see what the psychiatry theory tells us in the next part.

## Lesson 5 "Science of Love" 【Part 2】

### 【精神医学の理論】

T: Now, let's learn about Andy's presentation. Whose theory does Andy introduce?

S: He introduces the theory of Thomas Lewis.

T: Right. Who is Thomas Lewis?

S: He is an American psychiatrist.

T: Correct. Dr. Lewis is a psychiatrist and treats people with mental illnesses. In Lewis's opinion, ②why do people fall in love?

S: People fall in love because of their childhood experiences.

### 【身体的近さの意味確認】

T: In his theory, ②what kind of childhood experience is the most important? What matters most in childhood experiences?

S: Physical closeness as a child.

T: What does "physical closeness" mean? Is it closeness of your body or your mind?

S: Body.

T: That's correct. Then what is "closeness"? Keeping a distance or touching each other?

S: It means touching each other.

T: Right. So what does physical closeness mean?

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S: I think it means body contact.

T Right. Like what? ②What could this mean in the case of a child?

S: Being held in a mother's arms.

### 【子どもの頃の経験の影響】

T: Good answer. ③Why is physical closeness as a child important when it comes to falling in love?

S: Because our brain remembers how comfortable that was.

T: Yes, we remember how comfortable it was to be held in a mother's arms. We felt it comfortable to be held by our mother. Our brain remembers that the physical closeness as a child was very comfortable.

T: [Advanced] Physical closeness is the closeness in relationship, and it also means mental closeness. According to Lewis, the feelings of comfort are recorded in our brain. These memories can last in our brain even when we become adults.

### 【どのような人にひかれるか】

T: So ③when we fall in love, to whom are we attracted?

S: We are attracted to someone who reminds us of our good childhood memories.

T: What are good childhood memories?

S: They are like being held in a mother's arm as a child.

T: Good guess. Well done. ③What do we do as we grow older?

S: We seek the same sort of experience.

T: ③[Inference] What's the same sort of experience? Can you explain what it is?

S: We seek the same experience that we experienced as a child.

T: What is that?

S: It is a comfortable experience.

T: Right. It is a comfortable experience from your good childhood memories. ④Do we notice when we are seeking the same comfortable experience as a child?

S: No. We seek it without being aware that we are doing this.

### 【未来志向か過去志向か】

T: Then, according to his theory, why do we love someone? ④Do we hope to be with the person in the future, or do we hope to go back to the past?

S: We hope to go back to the past.

T: ④For what purpose?

S: To enjoy comfort and affection again.

T: Right. We seek good and comfortable childhood memories, and the affection we felt in our mother's arms as a child.

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【真の相手はどのような人か】

T: Then, ④what does the person who becomes “the only one” have?

S: He or she actually has a certain look or smell.

T: ④What does a certain look or smell do to us?

S: A certain look or smell can bring us back very deep memories.

T: ④[Inference] What is a certain look or smell? Whose look or smell is it?

S: It is like the look or smell of our mother.

T: Good guess. ④[Inference] What are deep memories, then?

S: They are comfortable childhood memories with our mother.

【記憶を呼び起こすのは?】

T: Very impressive. They are comfortable good experiences of physical closeness as mother and child in the past. Excellent answer. ④Are we usually aware of these deep memories?

S: No. They are usually hidden.

T: Good answer. From a psychiatrist’s point of view, they are hidden memories. ④[Inference] What activates these memories?

S: A certain look or smell.

T: Good guess. The certain look or smell the person who becomes “the only one” has. It activates the hidden memories of comfortable good childhood memories, and eventually we love the person.

T: It is indeed an interesting theory. In part (3), we are going to study another theory that Megumi will present.

### Lesson 5 “Science of Love” 【Part 3】

【精神医学の理論の振り返り】

T: In part (2), Andy introduced the theory from a psychiatric point of view. Would you tell me the general idea about it?

S: In his theory, childhood experiences cause people to love someone. Physical closeness as a child matters most. We love someone because we want to enjoy the same comfort and affection we had as a child.

T: Excellent summary. Good job! In part (3), Megumi introduced another interesting theory, which is different from the one Andy explained in part (2). Let’s learn about this theory, and compare it with the one we learned in part (2).

【遺伝学の理論】

T: Now, class. From what point of view does Megumi give an explanation?

S: She gives an explanation from genetics.

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T: Right. ②According to the theory from genetics, who are we attracted to?

S: We are attracted to people who have different types of genes from our own.

T: ③Why are we attracted to someone with different genes?

S: Because the immune system gets stronger if different types of genes are combined.

### 【免疫のシステム】

T: [Advanced] Right. How helpful is the immune system to our bodies? I mean, how does the immune system work in our bodies?

S: It helps our bodies fight against infection and diseases.

T: Good answer. The immune system in our bodies produces substances to help us fight against infection and diseases.

T: Well, there are various kinds of diseases, and we have to fight against as many kinds of infection and diseases as possible, right? We can make our immune system stronger by combining different types of genes. ④How do we get different types of genes?

S: We get them from our parents.

T: Correct. ③If a baby can inherit different types of genes, then how will the baby become?

S: The baby will have a stronger immune system and it will become healthier.

### 【健康な子どもを産むためには？】

T: [Advanced] That's correct. Good answer. As you may know, marriages between close relatives are prohibited. Can you guess why? Any volunteer?

S: Because close relatives have the same or similar types of genes, and the child is more likely to have a weaker immune system and be less healthy.

T: Good guess. So to sum up, according to this theory, ③how is a woman more likely to have a healthier baby?

S: She is more likely to do so by choosing a man whose genes are different from hers.

T: Correct. By choosing a person with different genes as the father of her child, she increases the chance that her child will be healthy.

### 【汗をかいた T シャツの実験】

T: Now, how do we find a person whose genes are different from ours? Claus Wedekind, a Swiss researcher carried out an experiment to find out how genes determine our preference in choosing a partner. What did he do?

S: He carried out a study called "Sweaty T-shirt."

T: Correct. How was the experiment conducted?

S: The women smelled T-shirts previously worn by unknown men for two days. They were asked to indicate which T-shirts they were most attracted to.

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T: That's correct. Then, what about the result of the experiment? Look at the chart on page 63.  
What was the result of the "Sweaty T-Shirt" experiment?

S: The number of women who were attracted to genetically different men was 1.5 times as large as that of women who were attracted to genetically similar men.

### 【実験結果の考察】

T: Good explanation. ④What did this result show?

S: It showed that the women were more likely to choose the smell of T-shirts worn by men who were most genetically different from themselves.

T: [Advanced] Right. Actually, according to the women participants, the odor of the T-shirt which they felt comfortable with reminded them of their present or past partner. On the other hand, the odor of the T-shirt which they felt uncomfortable with was similar to that of their brothers or father, who are genetically close to them.

### 【精神医学と遺伝学の理論比較① (精神医学)】

T: Now, class. We have seen two different theories in part (2) and part (3). Let's compare these theories. In the psychiatric theory we learned in part (2), who are we attracted to?

S: We are attracted to someone who reminds us of our good childhood memories.

T: Right. Who reminds us of our good childhood memories such as being held in our mother's arms?

S: I think someone who has a certain look or smell.

T: So what kind of look or smell, for instance?

S: Maybe she looks or smells like the mother.

T: Someone might look like a family member, right?

S: Yes.

T: What about genes? ④[Inference] Do they have similar genes?

S: Yes, I think so. They must be genetically similar.

### 【精神医学と遺伝学の理論比較② (遺伝学)】

T: OK. What about the genetic theory in part (3)? Who are we attracted to?

S: We are attracted to someone who is genetically different, not someone who is genetically similar.

T: As you can see, the theory in part (2) is opposite to the theory in part (3) from the genetic point of view, right? The psychiatric theory in part (2) explains that we are attracted to someone who reminds us of childhood memories in our mother's arms.

T: [Advanced] Actually, the only one we love has a certain look or smell of our mother, or perhaps of the other caretakers like our father, elder brother and sister, or even grandparents, who are genetically similar to us.

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### 【理論間の類似点と相違点】

T: ④[Inference] Can you see the similarities in both theories?

S: In the theory in part (2), we are attracted to someone who has a certain look or smell. In part (3), in the experiment, the women who participated in the experiment smelled T-shirts and rated them as pleasant or unpleasant.

T: Very good. Indeed. Smell is the key to judge whether we are attracted to someone or not in both theories. Any other opinion? ④[Inference] Has anybody found the differences in these ideas?

S: According to the theory in part (2), we hope to go back to the past to enjoy comfort and affection. However, in the theory in part (3) we are attracted to people who have a different type of genes from our own. If a child inherits different types of genes from each parent, then the child can be stronger. So, I think we turn our attention to our future.

T: Very good analysis. Since both of these theories are based on different scientific viewpoints, it's important to compare them and find the differences and similarities between them. As you have found, both researchers were interested in what kind of person we are attracted to or what kind of person we prefer when we fall in love. In part (4), let's see another theory.

### Lesson 5 “Science of Love” 【Part 4】

#### 【これまでの理論の振り返り】

T: So far we studied two different theories about love. One is the theory of Thomas Lewis we learned in part (2), and the other one is that of Claus Wedekind we learned in part (3). Although both researchers argued differently about love, they have something in common concerning their interest in love. What is that?

S: Both researchers were interested in who we fall in love with.

#### 【生物学の理論】

T: Exactly. Both theories are about how we choose the people we love. Excellent answer. Lewis described his psychiatrist's point of view, and Wedekind gave his genetic point of view. What about part (4)?

S: Helen Fisher, an American researcher, explains her theory in biology.

T: Correct. Does she also explain who we fall in love with?

S: No, she explains why we fall in love with someone.

T: Good answer. ②What does she say about the cause of love?

S: She says that chemicals in the body may cause love.

#### 【恋のメカニズム】

T: Yes. Dr. Fisher explains the mechanism, or the process of how we fall in love. Her theory has a

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different point of view from the theories of part (2) and part (3), right? In her theory, ②what kind of chemical on the body may cause love?

S: The chemical called dopamine.

T: Right. ③When is dopamine produced?

S: It is produced when we do something exciting or enjoyable.

T: Correct. ②How does dopamine work in our body?

S: It plays a key role in controlling people's moods and body movements.

### 【ドーパミンの効果】

T: ③What did Helen Fisher find about dopamine relating to love?

S: She found that a lot more dopamine was released in the brain of people in love.

T: ④How did she try to find that dopamine causes love?

S: She compared parts of the brain of people in love with those of people not in love.

T: Correct.

T: From this finding, ③what conclusion did she come to?

S: She came to the conclusion that we are literally “on a high” when we are in the initial stage of falling in love.

T: Correct. What do you mean by “on a high”? Would you explain the conclusion in a simpler expression?

S: When we've just started to love someone, we get excited.

### 【パート1の恋愛行動との関連】

T: Very good. Indeed, it is literally the stage when we are “on a high” in the level of dopamine. Dopamine is produced when we enjoy something and feel excited.

T: Also, dopamine controls people's moods and body movements. Do you remember what we learned in part (1)? ④[Inference] How does dopamine control people's body movements as well as their moods? Any examples?

S1: People cannot think of anything else but the one they love. They lose their appetite and are not able to sleep.

T: Very good answer. Any other opinion?

S2: I think they tend to look at only the good side of the one they love.

T: Why do you think so?

S2: Because when people love someone, they go crazy about the one they have fallen in love with.

T: [Advanced] Excellent answer. This is the so-called ‘Love is blind’ condition, isn't it? All of you know that ‘chemistry’ means a scientific study. I would like you to know that ‘chemistry’ also means the relationship between two people because the relationship between the two is like a chemical reaction.

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### 【恋のステージの移り変わり】

T: ④When we are in the first stage of falling in love, what do we feel?

S: We first feel passion when we fall in love.

T: Exactly. As we learned, we are “on a high” and become passionate in the initial stage of love when we first start to love someone. The first stage could be the stage of passion. ④After the first stage is over, what happens?

S: The levels of dopamine eventually decline over time.

T: ④[Inference] Why do the levels of dopamine decline?

S: Because we lose our passion of love.

T: That’s right. Dopamine is released more in the initial stage when we feel the passion of love, but it declines as we lose our first passion. We cannot be “on a high” forever, right?

### 【オキシトシンの効果】

T: In the next stage, ②what kind of chemical plays an important role?

S: Oxytocin does.

T: ③When oxytocin is produced frequently, what happens?

S: Couples feel closer to each other and their relationship can last longer.

T: ③When is oxytocin produced?

S: It is produced when we feel a connection with others, like kissing someone or hugging children.

T: Yes, in other words, oxytocin is produced when we feel physical closeness.

### 【生物学の理論と他の理論の比較】

T: All right. Could you summarize the connection between love and the two chemicals, dopamine and oxytocin?

S: Dopamine makes people fall in love, and oxytocin makes love last for a long time.

T: [Advanced] Very good. ④[Inference] Which is this biological theory similar to, the psychiatric theory in part (2) or the genetic theory in part (3)?

S: I think that this theory is similar to the theory in part (2) in terms of physical closeness.

T: Can you explain more?

S: Hugging is similar to the experience of being held by our mother.

T: Right. Oxytocin will be produced when we are in a mother’s arms, which may create a comfortable experience. On the other hand, the initial stage of passion may be as a result of being attracted to someone genetically different.

T: In this lesson, we have studied three different theories, and they are somehow related each other. What is one thing we know for sure about love?

S: It is that we can’t help falling in love.