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Medical English Education Incorporating AI Dialogue

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Today's topics

1. Current Healthcare Environment in Japan
2. The Importance of Easy-to-Understand Medical English
3. Developing an English-Thinking Mindset
4. Innovation in AI
5. Becoming Comfortable with AI
6. Dialogue-Based Learning with AI
7. Case Presentations and Role-Playing with AI
8. Hands-On Training with AI
9. Top Gun – Medical Version

The basic steps required to implement this model are as follows:

- 1. Building a basic English-thinking mindset.**
- 2. Enhancing adaptability to AI.**
- 3. Applying medical knowledge and skills.**
- 4. Collecting basic medical information.**
- 5. Role-playing with AI.**
- 6. Case presentations.**
- 7. Conducting hands-on training activities.**

Protocol 1 : Current healthcare environment in Japan

1. People, facilities, and systems involved in healthcare.
2. The revolutionary advancements in AI.
3. The most important thing in our relationship with AI.

(Sam Altman)

STRATEGIES

I propose an interactive approach that integrates AI-driven dialogue into Medical English education.

Protocol 2 : The Importance of Easy-to Understand English

- 1. You need to share a wide range of information.**
- 2. You need to express yourself in English.**

STRATEGIES

- 1. Let's start by using easy-to-understand English.**
- 2. Build a mutual understanding.**

Protocol 3 : Developing an English-Thinking Mindset

1. Translating Japanese into English can be difficult.
2. Most short Japanese conversations in clinical settings can be translated into English using simple words, such as “let me” or “have”.

STRATEGIES

Collect real-life clinical Japanese dialogues and rephrase them into simple, easy-to-understand English.

For examples:

血圧測ります : Let me check your blood pressure.

痛い時すぐに教えて : Let me know immediately if you feel any pain.

熱がある? : Do you have a fever?

お腹が痛い? : Do you have a stomachache?

糖尿病がある? : Do you have Diabetes?

Protocol 4 : Innovation in AI

- 1. AI innovations are powerful.**
- 2. AI is highly cost-effective.**
- 3. AI speaks a so-called universal language**

STRATEGIES

- Speak to the AI on your mobile phone or personal computer and experience how comfortable it is to use.**
- Foster human creativity and growth while using AI.**
- If AI ends up doing everything for us.**
- AI should be used as a supporter, partner, or copilot.**

Protocol 5 : Becoming Comfortable with AI

1. Experience the comfort of voice-based interactive dialogue with AI
2. Start by talking in Japanese.
3. Gradually transition to simple English dialogue, the shorter, the better.

STRATEGIES

Try translating short Japanese sentences into English using AI.

これなんていうの？

もう一回言って。

もっと分かりやすく言って。

What do you call this?

Could you say that again?

Could you say it in a simpler way?

Protocol 6 : Dialogue-Based Learning with AI

1. Quick back and forth chats in English with AI
2. Gradually, we can have longer conversations

STRATEGIES

You can set the tone by using words like “concisely” or “briefly” to get used to interacting with AI.

For examples :

“貧血の症状について簡単に教えて、AI”

“AI, please briefly tell me about the symptoms of anemia.”

“貧血の原因について簡潔に教えて、AI”

“AI, please tell me concisely about the causes of anemia.”

You can naturally transition into deeper discussion.

Protocol 7 : Case Presentation and Role-Playing with AI

1. Concise opening statement and standard clinical procedure.
2. Role playing with AI

STRATEGIES : Example

A 60-year-old woman with a history of breast cancer surgery presents to your hospital with the chief complaints of fever and abdominal pain, after experiencing one month of general malaise.

Let's ask the AI.

“What is the most likely diagnosis?”

The AI's response is as follows:

Key points to consider

A history of breast cancer surgery raises concern for:

Recurrence or metastasis (especially liver, bone, peritoneum)

Post-surgical or post-treatment complications

Fever + abdominal pain suggests:

Infection

Inflammation

Obstruction

Organ dysfunction

"It makes sense that liver metastasis comes to mind".

Protocol 8 : Hands-On Training with AI

1. Try hands-on training with AI.
2. Feel free to ask the AI any questions during the training.

STRATEGIES

① Ultrasound hands-on training.

“AI, please give a brief explanation of sliding, tilting, rocking in ultrasound examinations”.

AI's answer :

Sliding: Changing the probe's position.

Tilting: Changing the probe's angle.

Rocking: Giving the transducer a small movement to center the point of interest.

Once we understand the basic outline, try expressing them in our own words.

Protocol 8 : Hands-On Training with AI

② Manual Muscle Testing (MMT) hands-on training

STRATEGIES

“Let’s translate unique Japanese instructions into English with AI”

「親指と人差し指をつけて円をつくり、強く押してください、私が指を入れてその円を崩そうとしますので、そうならないように頑張ってください」を簡潔な英語で表現できますか？

AI’s answer:

“Sure thing. Make a circle with your thumb and index finger, and press firmly. I will try to break the circle by inserting my finger, so do your best to keep the circle intact.”

Protocol 9: Top Gun – Medical Version

1. Through this initiative, we can build proficiency.
2. We can help highly skilled medical staff sharpen key abilities.
3. It's a medical version of *Top Gun*.

Conclusion

- 1. We should use AI as a supporter, partner, or copilot to enhance human creativity and development.**
- 2. This initiative, which integrates AI-driven interactive dialogue into medical English education, has great potential to transform the field and improve healthcare in Japan.**