Survey Form

Background

1. Job / Occupation

2. Major

3. Research domain

4. Please rate your English proficiency.

( ) High ( ) Medium ( ) Low

5. How frequently do you use large language models (LLMs; e.g., ChatGPT, Gemini)?

( ) Never used ( ) Almost never ( ) 1-2 times per month
( ) 1-2 times per week ( ) Almost every day ( ) Several times per day

6. How frequently do you use machine translation tools (e.g., DeepL, Google Translate)?

( ) Never used ( ) Almost never ( ) 1-2 times per month
( ) 1-2 times per week ( ) Almost every day ( ) Several times per day

7. How frequently do you use Korean-English dictionaries (e.g., Naver, Daum)?

( ) Never used ( ) Almost never ( ) 1-2 times per month
( ) 1-2 times per week ( ) Almost every day ( ) Several times per day

8. How frequently do you use English-English dictionaries (e.g., Cambridge, Oxford)?

( ) Never used ( ) Almost never ( ) 1-2 times per month
( ) 1-2 times per week ( ) Almost every day ( ) Several times per day

9. For what purposes do you usually use LLMs (e.g., ChatGPT, Gemini)?

[ ] To help understand English / foreign language sentences
[ ] To obtain conceptual explanations (e.g., AI / mathematics / statistics concepts)
[ ] For programming: writing and debugging code
[ ] For writing assistance (e.g., summarizing, editing text, drafting reports or e-mails)
[ ] For information search / background research
[ ] To get help with assignments or academic writing (e.g., term papers, theses)
[ ] Other: _____

10. For what purposes do you usually use machine translation tools (e.g., DeepL, Google Translate)?

[ ] To read English papers, articles, or documents
[ ] To translate e-mails, messages, or short sentences
[ ] To translate texts for assignments or reports
[ ] To write more natural expressions in a foreign language
[ ] To translate simple phrases for travel or daily life
[ ] Other: _____

11. For what purposes do you usually use general dictionaries?

[ ] To look up the meanings of unknown words
[ ] To check example sentences for a word
[ ] To check pronunciation and usage of a word
[ ] To help with English writing or homework
[ ] To study foreign languages
[ ] To learn technical terms used in a specific domain (e.g., AI, biology, finance)
[ ] Other: _____

Dictionary Word-Level Survey

12. Which tool provided the most appropriate difficulty level in its explanations?

( ) 1. AdapDict provided the most appropriate difficulty level.
( ) 2. Google Translate provided the most appropriate difficulty level.
( ) 3. Cambridge Dictionary provided the most appropriate difficulty level.
( ) 4. AdapDict and Google Translate were similar; Cambridge Dictionary was weaker.
( ) 5. AdapDict and Cambridge Dictionary were similar; Google Translate was weaker.
( ) 6. Google Translate and Cambridge Dictionary were similar; AdapDict was weaker.
( ) 7. All three tools were similar.

13. Which tool provided the clearest explanations?

( ) 1. AdapDict provided the clearest explanations.
( ) 2. Google Translate provided the clearest explanations.
( ) 3. Cambridge Dictionary provided the clearest explanations.
( ) 4. AdapDict and Google Translate were similarly clear; Cambridge Dictionary was weaker.
( ) 5. AdapDict and Cambridge Dictionary were similarly clear; Google Translate was weaker.
( ) 6. Google Translate and Cambridge Dictionary were similarly clear; AdapDict was weaker.
( ) 7. All three tools were similarly clear.

14. Which tool helped you understand the word most effectively?

( ) 1. AdapDict helped the most.
( ) 2. Google Translate helped the most.
( ) 3. Cambridge Dictionary helped the most.
( ) 4. AdapDict and Google Translate helped similarly; Cambridge Dictionary helped less.
( ) 5. AdapDict and Cambridge Dictionary helped similarly; Google Translate helped less.
( ) 6. Google Translate and Cambridge Dictionary helped similarly; AdapDict helped less.
( ) 7. All three tools helped to a similar extent.

15. Which tool best reflected the meaning of the word as used in real-world domain contexts?

( ) 1. AdapDict reflected domain usage best.
( ) 2. Google Translate reflected domain usage best.
( ) 3. Cambridge Dictionary reflected domain usage best.
( ) 4. AdapDict and Google Translate were similar; Cambridge Dictionary reflected domain usage less accurately.
( ) 5. AdapDict and Cambridge Dictionary were similar; Google Translate reflected domain usage less accurately.
( ) 6. Google Translate and Cambridge Dictionary were similar; AdapDict reflected domain usage less accurately.
( ) 7. All three tools reflected domain meaning similarly.

16. Which tool would you most prefer to use again for learning new vocabulary?

( ) 1. I would most prefer to use AdapDict again.
( ) 2. I would most prefer to use Google Translate again.
( ) 3. I would most prefer to use Cambridge Dictionary again.
( ) 4. I would use AdapDict and Google Translate; Cambridge Dictionary less so.
( ) 5. I would use AdapDict and Cambridge Dictionary; Google Translate less so.
( ) 6. I would use Google Translate and Cambridge Dictionary; AdapDict less so.
( ) 7. I would use all three tools similarly.

Target Words Used in the Dictionary Word-Level Tasks

- **yield**
- General meaning: 생산하다
- Domain meaning (Finance): 수익률
- **embedding**
- General meaning: 삽입·포함
- Domain meaning (AI): 텍스트·이미지 등을 벡터로 표현하는 방식
- **alignment**
- General meaning: 정렬·맞추기
- Domain meaning (AI): 모델의 행동·출력을 인간 의도에 맞추는 과정
- **translation**
- General meaning: 번역
- Domain meaning (Biology): mRNA 기반 단백질 합성 과정
- **promoter**
- General meaning: 촉진자
- Domain meaning (Biology): 전사 시작 부위

Dictionary Paragraph-Level Survey

17. How well did you understand the content of Passage 1: Macro Uncertainty & Asset Pricing?

( ) 1. Did not understand at all	( ) 2. Understood poorly	( ) 3. Understood partially	( ) 4. Mostly understood	( ) 5. Fully understood

18. How difficult did you find Passage 1: Macro Uncertainty & Asset Pricing?

( ) 1. Very easy	( ) 2. Easy	( ) 3. Moderate	( ) 4. Difficult	( ) 5. Very difficult

19. How well did you understand the content of Passage 2: RNA-Based Regulation?

( ) 1. Did not understand at all	( ) 2. Understood poorly	( ) 3. Understood partially	( ) 4. Mostly understood	( ) 5. Fully understood

20. How difficult did you find Passage 2: RNA-Based Regulation?

( ) 1. Very easy	( ) 2. Easy	( ) 3. Moderate	( ) 4. Difficult	( ) 5. Very difficult

21. How well did you understand the content of Passage 3: Loss Landscape & Flat Minima?

( ) 1. Did not understand at all	( ) 2. Understood poorly	( ) 3. Understood partially	( ) 4. Mostly understood	( ) 5. Fully understood

22. How difficult did you find Passage 3: Loss Landscape & Flat Minima?

( ) 1. Very easy	( ) 2. Easy	( ) 3. Moderate	( ) 4. Difficult	( ) 5. Very difficult

23. Which tool was most helpful for understanding the passage?

( ) 1. AdapDict was the most helpful.
( ) 2. Google Translate was the most helpful.
( ) 3. DeepL was the most helpful.
( ) 4. AdapDict and Google Translate were similar; DeepL was weaker.
( ) 5. AdapDict and DeepL were similar; Google Translate was weaker.
( ) 6. Google Translate and DeepL were similar; AdapDict was weaker.
( ) 7. All three tools were similar.

24. Which tool provided the most appropriate difficulty level in its translation (and explanation, if applicable)?

( ) 1. AdapDict provided the most appropriate difficulty level.
( ) 2. Google Translate provided the most appropriate difficulty level.
( ) 3. DeepL provided the most appropriate difficulty level.
( ) 4. AdapDict and Google Translate were similar; DeepL was weaker.
( ) 5. AdapDict and DeepL were similar; Google Translate was weaker.
( ) 6. Google Translate and DeepL were similar; AdapDict was weaker.
( ) 7. All three tools were similar.

25. Which tool imposed the lowest cognitive load while you were trying to understand the output?

( ) 1. AdapDict imposed the least cognitive load.
( ) 2. Google Translate imposed the least cognitive load.
( ) 3. DeepL imposed the least cognitive load.
( ) 4. AdapDict and Google Translate imposed similar load; DeepL imposed more.
( ) 5. AdapDict and DeepL imposed similar load; Google Translate imposed more.
( ) 6. Google Translate and DeepL imposed similar load; AdapDict imposed more.
( ) 7. All three tools imposed similar cognitive load.

26. Which tool would you prefer to use again when reading similar paragraphs in the future?

( ) 1. I would prefer to use AdapDict again.
( ) 2. I would prefer to use Google Translate again.
( ) 3. I would prefer to use DeepL again.
( ) 4. I would choose AdapDict and Google Translate; DeepL less so.
( ) 5. I would choose AdapDict and DeepL; Google Translate less so.
( ) 6. I would choose Google Translate and DeepL; AdapDict less so.
( ) 7. I would use all three tools similarly.

Passages Used in the Dictionary Paragraph-Level Tasks

Passage 1: Macro Uncertainty & Asset Pricing (Economics)
Macroeconomic uncertainty influences asset prices through channels distinct from standard risk premia. Spikes in uncertainty raise compensation for tail risks and steepen long-term yields even without changes in growth expectations. At the same time, volatility-sensitive intermediaries cut duration exposure, amplifying long-horizon yield movements. Consequently, the curve may reflect precautionary behavior rather than shifts in fundamentals.
Source: Journal of Finance / Review of Finance uncertainty-risk papers

Passage 2: RNA-Based Regulation (Biology)
Gene-regulatory networks integrate microRNA repression, lncRNA scaffolding, and epigenetic feedback. Non-coding RNAs actively shape chromatin architecture and guide the recruitment of transcriptional cofactors. These RNA-mediated interactions regulate transitions from pluripotency to lineage commitment, maintaining stable expression states. When disrupted, RNA-guided control can propagate across signaling pathways and alter cell-fate decisions.
Source: PMC "Regulation of Gene Expression-AP Biology Review", 2020

Passage 3: Loss Landscape & Flat Minima (AI)
Over-parameterized neural networks often converge to wide, low-curvature minima, which support better generalization because small parameter perturbations barely affect predictions. In contrast, strongly adaptive optimizers can steer updates toward sharp minima, where gradients shift rapidly and robustness declines. How optimization paths traverse this landscape remains key to understanding generalization in modern deep models.
Source: Deep learning generalization geometry papers (e.g., "Sharp vs. Flat Minima")

Encyclopedia Word-Level Survey

27. Which tool communicated the key information more clearly?

( ) 1. AdapDict performed better.
( ) 2. Wikipedia performed better.
( ) 3. AdapDict and Wikipedia were similar.
( ) 4. Both tools were insufficient.

28. Which tool had a more understandable explanation structure?

( ) 1. AdapDict had a better structure.
( ) 2. Wikipedia had a better structure.
( ) 3. Both tools were similar.
( ) 4. Both tools were insufficient.

29. Which tool provided background information, examples, or contextual details that were more helpful for understanding?

( ) 1. AdapDict provided more helpful context.
( ) 2. Wikipedia provided more helpful context.
( ) 3. Both tools were similar.
( ) 4. Both tools were insufficient.

30. Which tool provided the most appropriate amount and depth of information?

( ) 1. AdapDict provided the most appropriate information.
( ) 2. Wikipedia provided the most appropriate information.
( ) 3. Both tools were similar.
( ) 4. Both tools were insufficient.

31. Which tool contributed more to your overall conceptual understanding?

( ) 1. AdapDict was more helpful for conceptual understanding.
( ) 2. Wikipedia was more helpful for conceptual understanding.
( ) 3. Both tools were similar.
( ) 4. Both tools were insufficient.

Target Terms Used in the Encyclopedia Word-Level Tasks

- 양자 얽힘 (Quantum Entanglement) - Physics
- 터널 효과 (Quantum Tunneling) - Physics
- 자구행위 (Acts of Self-Help) - Law
- 용익물권 (Rights of Use and Profit) - Law

Encyclopedia Paragraph-Level Evaluation

32. How well did you understand the content of Passage 1: Decoherence and Quantum Error Correction?

( ) 1. Did not understand at all	( ) 2. Understood poorly	( ) 3. Understood partially	( ) 4. Mostly understood	( ) 5. Fully understood

33. How difficult did you find Passage 1: Decoherence and Quantum Error Correction?

( ) 1. Very easy	( ) 2. Easy	( ) 3. Moderate	( ) 4. Difficult	( ) 5. Very difficult

34. How well did you understand the content of Passage 2: Limitations on Co-surety Rights and Application of Surety Protection Law?

( ) 1. Did not understand at all	( ) 2. Understood poorly	( ) 3. Understood partially	( ) 4. Mostly understood	( ) 5. Fully understood

35. How difficult did you find Passage 2: Limitations on Co-surety Rights and Application of Surety Protection Law?

( ) 1. Very easy	( ) 2. Easy	( ) 3. Moderate	( ) 4. Difficult	( ) 5. Very difficult

36. Which tool was more helpful for understanding the passages?

( ) 1. AdapDict was better.
( ) 2. ChatGPT was better.
( ) 3. Both tools were similar.
( ) 4. Both tools were insufficient.

37. Which tool imposed less cognitive load when reading the provided outputs?

( ) 1. AdapDict imposed less cognitive load.
( ) 2. ChatGPT imposed less cognitive load.
( ) 3. Both tools were similar.
( ) 4. Both tools were insufficient.

38. Which tool provided a more appropriate difficulty level in its output?

( ) 1. AdapDict provided a more appropriate difficulty level.
( ) 2. ChatGPT provided a more appropriate difficulty level.
( ) 3. Both tools were similar.
( ) 4. Both tools were insufficient.

39. Which tool would you prefer to use again in similar situations?

( ) 1. I would prefer AdapDict.
( ) 2. I would prefer ChatGPT.
( ) 3. I would use both similarly.
( ) 4. I would prefer neither.

Passages Used in the Encyclopedia Paragraph-Level Tasks

Passage 1: 디코히런스 문제와 양자 오류 정정 (Quantum Decoherence & Quantum Error Correction)
양자 계산에서는 큐비트가 환경과 상호작용하며 디코히런스가 발생해 단일 큐비트의 코히런스를 오래 유지하기 어렵다. 이를 완화하기 위해 양자 오류 정정(QEC)은 여러 물리적 큐비트로 논리 큐비트를 구성하고, 안정자(stabilizer) 측정을 통해 오류를 감지·복구한다. 예를 들어 표면 코드는 2차원 격자에서 안정자 연산을 정의해 신드롬 패턴으로 오류 위치를 추론한다. 이러한 방식은 오류 확률을 크게 줄이지만, 실용적 수준에서는 하나의 논리 큐비트에 수백-수천 개의 물리 큐비트가 필요하다는 한계가 있다.

Passage 2: 연대보증인의 권리 제한과 보증인 보호법 적용 문제 (Surety Protection Law Issues)
채권자가 주채무자에게 청구하지 않고 곧바로 보증인에게 이행을 요구한 경우, 보증인은 주채무자의 집행 가능 재산을 증명하여 책임을 거절할 수 있다. 그러나 보증인이 이 권리를 포기하는 '연대보증 특약'이 있으면, 연대보증인은 채권자의 즉시 전액 청구도 거절할 수 없다. 문제는 연대보증인에게도 보증인 보호 특별법이 적용되는지 여부인데, 법 제2조가 금전채무 불이행을 보증하는 계약을 적용 대상으로 규정하면서도 입법 과정에서 연대보증인 보호 필요성이 강조되었기에, 해석에 따라 결론이 달라질 수 있다.

AdapDict-Specific Evaluation

40. How many difficulty levels did you use in AdapDict during the entire experiment?

( ) 1 level
( ) 2 levels
( ) 3 or more levels

41. Which difficulty level did you use most frequently in AdapDict?

( ) Elementary school
( ) Middle school
( ) High school
( ) Undergraduate
( ) Master
( ) Ph.D

42. The difficulty-level control (level setting) in AdapDict was helpful for learning.

( ) 1. Strongly disagree	( ) 2. Disagree	( ) 3. Neutral	( ) 4. Agree	( ) 5. Strongly agree

43. The domain-adaptive explanations in AdapDict helped me understand word meanings.

( ) 1. Strongly disagree	( ) 2. Disagree	( ) 3. Neutral	( ) 4. Agree	( ) 5. Strongly agree

44. Compared to other tools, AdapDict felt more learning-friendly.

( ) 1. Strongly disagree	( ) 2. Disagree	( ) 3. Neutral	( ) 4. Agree	( ) 5. Strongly agree

45. I would like to continue using AdapDict in the future.

( ) 1. Strongly disagree	( ) 2. Disagree	( ) 3. Neutral	( ) 4. Agree	( ) 5. Strongly agree

46. AdapDict helped my learning throughout the entire experiment.

( ) 1. Strongly disagree	( ) 2. Disagree	( ) 3. Neutral	( ) 4. Agree	( ) 5. Strongly agree

47. Compared with the other tools used in the experiment, AdapDict felt more suitable for learning.

( ) 1. Strongly disagree	( ) 2. Disagree	( ) 3. Neutral	( ) 4. Agree	( ) 5. Strongly agree

48. Please describe what aspects of AdapDict you found particularly helpful.

49. Please describe what improvements you think are needed for AdapDict.